June 1920 - October 1924

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
Washington

8792

Office of the Director

June 2, 1920.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR THE MONTHS OF JANUARY, FEBRUARY, AND MARCH, 1920

Compiled by
Division of Power Resources, United States Geological Survey

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER			BY FUELS		
	January	February	March	January	February	March
Alabama	34,864	36,780	39,354	14,452	7,929	9,736
Arizona	8,567	6,883	8,899	6,276	5,708	6,423
Arkansas	132	120	130	9,290	8,326	9,056
California	166,806	148,839	203,595	113,446	111,797	92,222
Colorado	12,784	12,082	12,665	22,811	19,282	20,416
Connecticut	9,069	8,553	17,607	59,256	49,801	52,120
Delaware	0	0	0	6,807	6,138	6,263
District of Columbia	0	0	0	23,317	20,763	21.356
Florida	965	818	1,024	10,897	10,461	11,210
Georgia	43,816	42,016	43,597	10,696	8,260	8,770
Idaho	48,564	43,336	43,065	1,348	1,133	1,315
Illinois	14,831	14,147	14,588	260,723	239,928	246,478
Indiana	2,943	2,741	3,637	91,817	71,503	73,351
Iowa	55,538	49,415	54,417	31,733	30,337	38,846
Kansas	1,741	1,240	1,598	35,913	32,391	32,916
Kentucky	0	0	0	23,449	21,768	22,711
Louisiana	0	0	0	18,126	16,755	17,884
Maine	23,491	20,866	23,658	1,577	1,614	918
Maryland	284	327	131	31,261	26,889	21,530
Massachusetts	21,987	16,248	34,367	147,914	129,365	123,042
Michigan	51,749	47,291	64,503	138,379	129,875	130,523
Minnesota	28,053	26,705	32,889	36,157	30,083	25,681
Mississippi	0	0	0	5,848	4,783	5,075
Missouri	5,720	3,987	4,916	54,143	52,672	53,740
Montana	89,574	90,411	104,991	596	540	515
Nebraska	909	662	668	20,436	17,305	18,028
Nevada	3,416	3,420	3,180	852	845	882
New Hampshire	4,322	4,001	5,223	5,166	4,289	2,319
New Jersey	143	102	161	101,478	88,120	94,975
New Mexico	53	57	59	1,593	1,447	1,529
New York	227,033	203,282	248,218	382,194	338,960	328,475
North Carolina	52,880	45,576	57,560	10,745	9,040	9,670
North Dakota	0	0	0	2,718	2,270	2,170
Ohio	1,490	2,101	3,222	258,335	234,061	252,803
Oklahoma	217	182	231	17,163	15,245	15,935
Oregon	32,359	28,323	32,125	7,845	8,624	7,788
Pennsylvania	45,359	43,500	56,881	329,625	294,483	326,074
Rhode Island	355	436	719	37,114	32,599	26,876
South Carolina	60,531	52,212	55,165	5,768	4,563	4,976
South Dakota	477	474	1,162	3,382	3,258	2,789
Tennessee	39,443	31,664	40,125	9,926	11,581	9,818
Texas	74	231	380	55,424	49,651	53,266
Utah	13,932	14,635	18,565	0	8	12
Vermont	15,467	11,732	18,969	786	1,038	344
Virginia	13,809	16,441	21,310	30,435	24,240	22,219
Washington	103,981	94,907	98,839	4,480	2,849	3,450
West Virginia	1,776	2,334	2,101	96,221	83,501	94,479
Wisconsin	37,843	32,321	43,585	42,336	43,606	43,733
Wyoming	152	145	154	4,585	4,178	4,162
Total	1,277,499	1,161,543	1,418,233	2,584,839	2,313,862	2,358,869
Total by water power and fuels				3,862,338	3,475,405	3,777,102

In some of the States electricity is produced by the use of wood as fuel. During March about 17.0 million kilowatt-hours, or 0.4 per cent of the total for the month, were produced by wood-burning plants. The following list gives the States and their output in millions of kilowatt-hours, which produces the larger amounts of electricity by the burning of wood: Oregon, 7.4; Minnesota, 1.7; Wisconsin, 1.3; Idaho, 1.3; Washington, 1.1; California, 0.5; Louisiana, 0.6; and Florida, 0.4.

Electric power produced in January, February and March, 1920, required the combustion of fuels in the quantities indicated in the following table:

	Quantities of Fuel Consumed.								
	Coal - Short tons			Petroleum & derivatives Barrels			Natural gas Thousands of cubic feet		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
Ala.	29,211	17,654	17,819	1,255	8,516	8,437	0	0	0
Ariz.	198	317	271	29,449	29,851	30,182	0	0	0
Ark.	8,675	7,654	8,710	4,888	4,049	3,933	218,596	207,185	232,834
Calif.	0	0	0	551,126	539,986	416,354	179,563	190,449	165,474
Colo.	43,345	38,968	40,545	110	100	110	0	0	0
Conn.	77,311	68,269	72,176	4,374	3,722	2,425	10,236[a]	15,133[a]	14,155
Del.	9,139	9,834	10,214	0	0	0	0	0	0
D.C.	23,237	21,104	22,171	0	0	0	0	0	0
Fla.	2,333	2,342	2,423	59,095	62,579	64,049	0	0	0
Ga.	19,556	10,875	10,268	19,605	27,702	27,366	0	0	0
Idaho	150	60	150	10	10	10	0	0	0
Ill.	411,719	394,151	386,629	472	593	237	0	0	0
Ind.	197,186	184,174	182,658	270	277	428	2,025	2,025	2,025
Iowa	92,871	89,141	90,682	576	555	608	0	0	0
Kans.	39,710	36,935	36,417	90,198	73,345	74,242	76,283	68,560	93,187
Ky.	43,181	39,521	40,127	188	295	310	5,622	8,308	10,402
La.	7,589	11,855	12,073	60,528	36,029	34,453	68,510	58,276	74,109
Me.	8,410	3,533	813	49	0	3,984	0	0	0
Md.	39,552	34,251	30,391	0	0	0	1,500	1,400	1,500
Mass.	172,978	156,334	149,803	1,764	1,542	1,122	0	0	0
Mich.	180,901	168,530	171,993	139	131	140	0	0	0
Minn.	64,060	56,286	56,024	620	490	1,610	0	0	0
Miss.	14,028	12,887	13,645	11,841	5,242	10,548	0	0	0
Mo.	91,446	92,867	101,512	90,657	55,986	39,086	0	0	0
Mont.	4,551	4,353	4,276	22	26	29	1,257	1,098	1,119
Nebr.	37,926	38,939	36,305	16,503	8,331	10,621	0	0	0
Nev.	247	232	248	1,890	1,798	1,208	0	0	0
N.H.	6,768	5,780	3,645	0	10	39	0	0	0
N.J.	156,280	129,816	135,009	136	112	92	280[a]	0	0
N.Mex.	4,788	4,288	4,688	866	851	849	0	4	0
N.Y.	479,109	411,625	402,866	763	825	788	72,579	57,834	8,997
N.C.	21,612	18,609	20,097	34	32	36	0	0	0
N.D.	19,362	16,007	14,266	150	194	207	0	0	0
O.	400,696	361,882	373,608	697	530	578	161,065[b]	119,409	284,616
Okla.	8,413	8,889	10,643	71,940	53,904	49,556	275,926	250,514	666,617
Ore.	190	197	635	3,657	1,752	798	0	0	0
Pa.	532,963	493,081	507,925	5	343	37	49,437	27,267	71,454
R.I.	35,196	32,624	28,675	7,560	8,764	11,492	0	0	0
S.C.	11,649	9,630	11,202	0	0	0	0	0	0
S.D.	7,827	7,645	6,522	1,936	2,576	2,697	0	0	0
Tenn.	24,216	22,486	23,953	25	23	25	0	0	0
Tex.	57,104	53,650	32,818	212,316	197,665	236,014	48,227	48,307	48,355
Utah	3	15	40	0	0	0	0	0	0
Vt.	1,748	2,250	441	2,146	2,121	1,753	0	0	0
Va.	43,269	37,575	33,737	132	119	129	0	0	0
Wash.	3,348	2,722	3,230	15,612	11,209	11,054	0	0	0
W.Va.	107,133	98,010	106,963	50	45	48	227,900	207,691	207,352
Wisc.	77,051	79,203	83,752	544	518	516	0	0	0
Wyo.	13,718	13,516	13,380	9,685	8,348	8,563	3,300	2,980	3,190
Total	3,631,953	3,299,556	3,316,438	1,273,883	1,151,096	1,056,763	1,401,406	1,266,436	1,885,386

a Artificial gas
b Includes 61,520 M cubic feet of artificial gas.

UNITED STATES BITUMINOUS COAL COMMISSION
in cooperation with
UNITED STATES GEOLOGICAL SURVEY

At the request of the United States Bituminous Coal Commission, and largely with the help of funds provided by the Commission, the Geological Survey is conducting a rapid canvass of stocks of coal in the hands of consumers. In order to get results quickly the inquiry was limited to a selected list of representative consumers, most of them large, including by-product coke ovens, iron and steel plants other industrials, gas and electric utilities, and retail coal dealers, scattered over the entire country. The stocks will be expressed in terms of week's supply for the companies reporting, and will then be comparable with other measurements of stocks made in the past by the Fuel Administration. Because of the present interest in the coal supply of New England the returns received up to 12:00 noon of Wednesday, June 23, are given in the following table:

STOCKS OF BITUMINOUS COAL ON HAND AT REPRESENTATIVE PLANTS IN NEW ENGLAND, February 29 and May 31, 1920 (Net tons).

	Number of plants		Weekly consumption[a] March to May, 1920	Tons on hand		Weeks' supply on hand[b]	
	On list	Reporting		February 29	May 31	Feb. 29	May 31
Coal gas plants - Total New England	17	16	13,276	100,798	61,857	7 4/7	4 4/7
Electric utilities Total New England	34	33	34,225[c]	135,312	199,830	3 6/7	5 6/7
Industrial consumers[d]							
Maine	27	21	13,861	83,577	90,154	6	6 3/7
New Hampshire .	39	33	5,587	38,179	27,313	6 5/7	4 6/7
Vermont	45	34	1,925	13,597	12,451	7	6 3/7
Massachusetts .	316	235	41,543	270,160	229,209	6 3/7	5 3/7
Rhode Island .	45	31	6,851	43,085	39,692	6 2/7	5 5/7
Connecticut . .	90	68	17,843	119,233	82,833	6 4/7	4 4/7
Total New England	562	422	87,610	567,831	481,652	6 3/7	5 3/7

(a) Includes yard losses, shrinkage, etc. (b) On basis of average consumption, March, April, and May, 1920. (c) Average weekly rate for an entire year. (d) Excludes Steel and by-product plants.

STOCKS OF BITUMINOUS AND ANTHRACITE COAL IN HANDS OF RETAIL COAL DEALERS IN NEW ENGLAND, FEBRUARY 29 ANDMAY 31, 1920.
(Net tons)

	Number of dealers		Average weekly (a) deliveries March, April, May, 1920.	Tons on hand.		Weeks supply on hand (b)	
	On list	Reporting.		February 29	May 31	February 29	May 31.
Anthracite:							
Maine	15	8	1,352	2,881	7,623	2	5 4/7
New Hampshire .	14	10	1,856	5,152	8,521	2 5/7	4 4/7
Vermont	9	5	1,479	2,483	6,526	1 4/7	4 2/7
Massachusetts .	72	49	38,980	169,980	121,652	4 2/7	3
Rhode Island ..	13	11	5,398	22,952	17,025	4 1/7	3 1/7
Connecticut ...	32	23	6,959	38,975	13,485	5 4/7	1 6/7
Total New England	155	106	56,024	242,423	174,832	4 2/7	3
Bituminous:							
Maine	15	8	2,869	9,337	6,161	3 1/7	2 1/7
New Hampshire .	14	10	881	861	2,585	6/7	2 6/7
Vermont	9	5	523	602	510	1 1/7	6/7
Massachusetts .	72	49	30,382	56,015	37,939	1 5/7	1 1/7
Rhode Island ..	13	11	16,727	16,964	17,766	1	1
Connecticut ...	32	23	3,580	11,426	5,083	3 1/7	1 2/7
Total New England	155	106	54,962	95,205	70,044	1 5/7	1 1/7

(a) Includes yard losses, shrinkage, etc.
(b) On basis of average deliveries March, April, and May, 1920

PREPARED BY F. G. TRYON.

June 26, 1920.

TABLE VI. ESTIMATED PRODUCTION OF BEEHIVE COKE (IN NET TONS)

	WEEK ENDED			1920 to date	1919[a] to date
	June 19[c] 1920	June 12[b] 1920	June 21 1919		
PENNSYLVANIA and OHIO	273,000	285,000	212,000	7,493,000	6,829,000
WEST VIRGINIA	28,000	27,000	15,000	664,000	551,000
ALABAMA, TENN., & GA.	38,000	46,000	25,000	999,000	835,000
VIRGINIA and KENTUCKY	23,000	27,000	21,000	652,000	593,000
COLORADO, OKLAHOMA and NEW MEXICO	7,000	8,000	8,000	184,000	271,000
WASHINGTON and UTAH	4,000	7,000	5,000	135,000	146,000
UNITED STATES TOTAL	373,000	400,000	286,000	10,127,000	9,225,000
DAILY AVERAGE	62,000	67,000	48,000	69,000	63,000

(a) Less one day's production during New Year's week to equalize number of days covered for the two years. (b) Revised from last report. (c) Subject to revision.

For the third time in succession the production of beehive coke declined during the week ended June 19. The total output is estimated on the basis of rail shipments at 373,000 net tons, a decrease below the revised figure for the preceding week of 27,000 tons. Production declined in every district except West Virginia.

LAKE SHIPMENTS

Lake dumpings during the week ended June 19, the first affected by the Lake pool, showed an increase of 43,000 tons. Service Order No. 5, reconstituting the pool, was issued by the Interstate Commerce Commission on June 9, and the first shipments under the pooling arrangement were made June 14. The performance during the first week was the largest of the season but less than half that of the corresponding week a year ago.

	Cargo coal	Vessel fuel	Total dumped
April, 1920	301,572	27,630	329,202
May, 1920	1,195,732	125,288	1,321,020
Week June 5	356,089	33,742	389,831
" " 12	430,640	33,697	464,337
" " 19	475,173	31,815	506,988
Season to date	2,674,000	249,000	2,923,000

Total dumpings during the week were 506,988 tons, as compared with 1,058,273 tons, last year.

The tonnage for the season to date now amounts to 2,923,000 net tons. In the corresponding period of 1918 it was 6,799,000 tons, and in 1919, 8,136,000 tons. The present season is therefore 3,876,000 tons behind 1918, and 5,213,000 behind 1919.

TIDEWATER SHIPMENTS.

The movement to tide during May as reported by the railroads was 4,436,000 net tons, the largest since October 1919, and one of the largest on record. Shipments to New England were 776,000 net tons an increase of 59,000 tons over the preceding week. Exports overseas increased by 39,000 tons reaching a total of 1,942,000 tons.

Port	New England shipments (net tons)	Exports (net tons)	Total dumped at tide (net tons)
New York	109,000	--------	999,000
Philadelphia	132,000	219,000	586,000
Baltimore	52,000	518,000	761,000
Hampton Roads	483,000	1,120,000	1,986,000
Charleston	------	85,000	104,000
Total	776,000	1,942,000	4,436,000

338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
Washington

Office of the Director — December 2, 1920.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR THE MONTHS OF JANUARY, FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY, AUGUST, AND SEPTEMBER, 1920

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	Jan.,Feb.&Mar.	April	May	June	July	August	Sept.
Ala.	110,998	37,669	40,941	37,284	37,833	32,745	30,940
Ariz.	24,349	10,278	10,512	10,017	10,728	9,201	8,793
Ark.	382	99	107	91	112	132	115
Calif.	518,139	220,155	258,526	223,715	227,361	241,287	224,801
Colo.	37,516	13,527	15,428	17,020	16,491	16,508	17,606
Conn.	34,350	19,282	18,038	15,751	12,004	10,924	9,501
Del.	0	0	0	0	0	0	0
D. C.	0	0	0	0	0	0	0
Fla.	2,807	861	934	1,019	1,284	1,294	1,227
Ga.	129,429	39,963	39,606	39,082	40,050	41,065	40,165
Idaho	134,972	47,253	56,381	54,007	56,632	56,149	49,866
Ill.	43,566	13,874	15,202	15,277	15,520	16,313	19,629
Ind.	9,321	3,982	3,465	3,528	3,701	2,091	2,129
Iowa	159,365	51,594	59,291	57,024	56,677	59,763	56,705
Kans.	4,579	2,054	2,597	1,534	1,970	1,710	2,165
Ky.	0	0	0	0	0	0	0
La.	0	0	0	0	0	0	0
Me.	83,791	28,382	29,459	28,416	27,061	28,721	27,593
Md.	742	265	175	303	205	210	148
Mass.	73,079	44,265	42,670	34,092	23,401	20,428	20,491
Mich.	160,000	70,850	59,937	55,056	53,878	51,572	48,135
Minn.	87,276	40,375	38,676	37,531	36,800	33,956	17,806
Miss.	0	0	0	0	0	0	0
Mo.	15,199	7,109	5,552	3,442	1,208	1,556	2,882
Mont.	284,976	100,335	95,245	92,713	94,610	98,821	94,369
Nebr.	2,239	582	987	1,302	1,361	1,311	1,348
Nev.	10,016	2,803	2,646	2,554	2,782	2,411	2,092
N. H.	13,550	5,837	5,632	5,325	4,630	4,770	4,538
N. J.	461	222	221	125	137	188	158
N. Mex.	169	73	82	79	77	58	60
N. Y.	678,424	269,491	250,364	244,591	246,677	244,432	241,876
N. C.	157,695	57,761	59,732	64,109	63,930	59,739	58,140
N. Dak.	0	0	0	0	0	0	0
Ohio	6,813	2,827	2,890	2,148	2,454	2,135	1,941
Okla.	584	51	143	44	175	163	174
Oreg.	93,118	31,529	32,001	31,696	28,507	25,574	29,993
Pa.	145,620	55,962	62,043	53,358	47,115	53,100	52,111
R. I.	1,510	628	933	797	416	258	199
S. C.	166,865	54,194	54,142	49,478	49,437	50,322	53,625
S. Dak.	2,113	1,487	1,412	1,633	1,627	1,342	1,372
Tenn.	107,697	37,292	41,132	40,667	40,278	33,784	35,534
Texas	685	299	310	310	316	359	332
Utah	46,465	14,656	13,954	17,938	17,556	18,725	17,494
Vt.	41,916	16,418	20,760	17,056	13,702	13,128	14,945
Va.	51,589	20,257	16,978	15,999	14,278	18,778	17,976
Wash.	296,735	95,672	94,812	90,318	92,307	92,241	94,727
W. Va.	6,211	2,319	2,391	1,982	1,568	1,849	1,760
Wis.	103,776	54,483	56,145	48,281	48,430	34,920	31,636
Wyo.	468	169	179	166	176	191	270
Total	3,849,555	1,477,184	1,512,631	1,416,858	1,394,462	1,384,224	1,337,367

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS						
	Jan.,Feb.&Mar.	April	May	June	July	August	Sept.
Ala.	32,075	10,616	8,541	8,385	8,718	13,461	15,604
Ariz.	11,973	3,822	4,904	4,955	4,543	4,530	4,104
Ark.	26,656	8,288	8,426	10,106	11,536	11,093	10,203
Calif.	305,552	66,026	60,957	95,388	123,049	132,160	96,714
Colo.	62,584	17,859	16,111	15,165	16,438	15,580	15,114
Conn.	152,381	35,680	37,576	38,594	43,202	43,826	44,515
Del.	19,208	5,994	5,733	5,908	6,099	6,334	6,064
D. C.	65,436	20,017	20,254	20,087	20,617	20,818	20,321
Fla.	32,226	10,024	9,464	8,912	9,047	8,984	9,115
Ga.	27,726	8,586	8,744	7,818	7,770	7,952	8,351
Idaho	761	127	125a/	125a/	125a/	125a/	125a/
Ill.	747,993	235,994	226,835	219,293	217,068	231,209	219,887
Ind.	236,648	70,166	66,741	69,159	72,059	75,470	76,137
Iowa	91,938	27,661	26,505	22,919	28,026	29,784	30,950
Kans.	101,180	29,182	30,719	31,407	36,415	38,728	36,539
Ky.	67,941	21,812	21,801	21,013	21,046	22,627	23,714
La.	52,740	16,645	18,122	17,904	15,050	19,256	19,094
Me.	4,109	747	420	343	365	528	770
Md.	79,680	17,199	15,294	20,137	26,783	24,831	23,712
Mass.	402,413	108,871	100,753	105,568	109,413	117,336	113,251
Mich.	395,434	96,623	112,452	123,924	123,906	124,887	121,027
Minn.	89,339	9,728	8,220	13,793	12,970	25,406	29,214
Miss.	16,298	5,041	5,770	5,329	5,458	5,182	5,613
Mo.	160,822	51,845	49,499	49,087	50,761	51,948	53,630
Mont.	1,651	511	506	500	599	606	600
Nebr.	55,784	19,045	19,029	18,612	18,672	18,845	19,092
Nev.	2,579	74	73	71	73	72	75
N. H.	11,774	2,155	2,130	2,373	3,143	3,199	3,189
N. J.	284,643	87,028	85,569	86,273	86,897	90,091	89,730
N. Mex.	3,038	1,113	1,162	1,182	1,240	1,252	1,227
N. Y.	1,049,604	292,229	289,879	304,250	312,240	316,701	311,775
N. C.	29,440	9,230	8,973	8,531	9,729	9,168	9,798
N. Dak.	7,158	1,968	1,835	1,923	2,110	2,232	2,332
Ohio	746,752	235,508	246,968	235,475	234,762	243,202	238,055
Okla.	48,253	15,304	16,464	16,059	17,518	17,324	17,649
Oreg.	24,257	5,470	6,956	6,603	10,013	14,442	9,784
Pa.	958,003	302,215	283,729	296,574	293,343	304,289	301,808
R. I.	96,589	23,641	20,024	27,010	31,456	28,616	29,430
S. C.	15,307	4,320	4,215	4,117	4,333	4,436	4,632
S. Dak.	9,429	2,157	2,377	2,257	2,244	2,486	2,523
Tenn.	31,064	11,313	10,758	10,502	13,348	14,882	13,416
Texas	158,555	50,985	48,010	52,432	55,831	57,719	60,867
Utah	20	30	6	0	0	1	1
Vt.	2,168	137	78	96	191	541	234
Va.	76,899	21,544	23,715	23,058	26,760	24,281	25,972
Wash.	11,641	2,697	2,348	1,881	3,352	6,297	4,344
W. Va.	275,599	88,538	91,646	92,426	93,281	89,981	90,057
Wis.	129,816	36,504	37,084	35,778	36,649	45,234	46,489
Wyo.	12,504	3,945	3,746	3,927	2,810	3,037	3,150
Total	7,225,640	2,096,214	2,071,246	2,147,229	2,231,058	2,325,710	2,269,997
Total by water power	3,849,555	1,477,184	1,512,631	1,416,858	1,394,462	1,384,224	1,337,367
Total by water power and fuels	11,075,195	3,573,398	3,583,877	3,564,087	3,625,520	3,709,934	3,607,364

a/ Fuel output of Idaho entirely by wood.

Kilowatt-hours of electricity produced by plants utilizing wood for fuel are as follows: California, 723,330; Florida, 96,572; Idaho, 125,000; Louisiana, 173,664; Minnesota, 487,835; Mississippi, 990,538; Oregon, 9,672,336; Washington, 833,727; and Wisconsin, 494,270.

Electric power produced in January, February, March, April, May, June, July, August, and September, 1920, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons						
	Jan.,Feb.& Mar.	April	May	June	July	Aug.	Sept.
Ala.	64,719	16,960	15,484	16,204	15,593	20,052	22,600
Ariz.	786	297	656	661	39	315	759
Ark.	25,018	8,029	6,422	9,443	11,633	12,083	12,618
Calif.	0	0	0	0	0	0	0
Colo.	123,105	36,404	30,453	29,851	33,507	33,210	33,510
Conn.	207,627	52,321	53,172	53,234	61,176	62,031	62,643
Del.	29,187	10,254	8,675	9,717	9,856	10,164	10,042
D. C.	66,512	18,850	20,640	19,784	23,036	20,957	18,939
Fla.	7,098	2,204	1,738	2,606	2,951	3,297	3,210
Ga.	40,699	11,106	9,466	8,164	8,022	8,042	9,962
Idaho	360	50	0	0	0	0	0
Ill.	1,181,766	358,068	337,318	328,619	331,418	346,220	345,756
Ind.	562,961	172,036	150,973	159,140	161,087	165,464	162,378
Iowa	275,114	79,520	74,936	72,704	78,165	80,172	80,719
Kans.	112,995	34,435	38,914	35,717	37,745	42,586	37,919
Ky.	122,924	38,981	38,203	37,113	38,944	40,439	40,080
La.	31,517	10,665	10,973	12,496	10,433	13,541	15,706
Me.	12,746	389	389	329	169	383	318
Md.	104,194	24,264	22,512	26,279	32,350	30,499	30,335
Mass.	467,686	125,456	114,140	118,750	125,087	133,233	129,437
Mich.	511,646	133,789	148,957	164,686	171,282	168,661	156,467
Minn.	164,514	27,220	24,452	26,742	26,896	40,060	44,619
Miss.	40,542	10,034	10,123	9,999	10,934	11,747	12,065
Mo.	282,830	96,775	93,436	88,487	96,502	93,873	99,369
Mont.	13,180	3,993	3,889	3,654	3,950	3,551	3,379
Nebr.	113,426	34,189	35,203	33,204	34,651	37,256	38,042
Nev.	727	229	225	214	219	215	242
N. H.	16,193	3,259	2,883	3,036	3,643	4,148	4,084
N. J.	422,909	128,355	124,514	125,190	123,989	127,050	125,305
N. Mex.	10,373	3,609	3,644	3,570	4,165	4,150	3,653
N. Y.	1,294,663	348,590	342,945	367,668	379,940	388,418	383,989
N. C.	60,492	19,013	18,181	16,643	17,951	18,425	19,513
N. Dak.	49,635	12,812	11,663	11,675	12,920	13,722	14,056
Ohio	1,136,969	343,501	325,639	320,852	325,828	324,712	320,886
Okla.	26,735	8,694	9,143	9,655	6,155	6,284	7,651
Oreg.	1,022	200	217	344	180	180	175
Pa.	1,524,076	450,659	439,844	433,858	440,807	445,684	453,608
R. I.	96,495	25,540	22,859	25,320	24,799	20,296	21,499
S. C.	32,481	9,347	9,440	8,514	8,851	9,116	9,950
S. Dak.	21,994	5,558	5,701	5,959	6,290	6,448	6,658
Tenn.	69,334	22,976	23,240	24,046	24,530	26,018	23,975
Texas	65,487	19,704	18,589	20,266	22,625	19,863	17,667
Utah	58	70	10	0	0	8	8
Vt.	4,439	261	153	235	357	604	315
Va.	114,591	31,799	33,202	33,543	39,920	34,403	38,681
Wash.	9,300	3,844	3,607	3,419	3,782	5,039	4,160
W. Va.	312,185	99,359	101,416	101,781	99,948	100,636	98,800
Wis.	236,972	68,395	65,487	62,930	65,514	75,668	78,303
Wyo.	37,659	11,349	10,775	11,248	7,664	8,346	9,339
Total	10,107,941	2,923,412	2,832,506	2,857,549	2,945,503	3010,407	3,013,429

State	Fuel oil - barrels						
	Jan.,Feb.&Mar.	April	May	June	July	August	Sept.
Ala.	18,208	8,424	7,348	5,654	9,508	8,194	9,522
Ariz.	57,542	18,527	21,294	21,936	21,868	20,495	18,769
Ark.	12,370	6,635	3,249	7,635	15,138	9,559	533
Calif.	1,498,714	334,312	373,763	532,073	569,705	585,761	478,559
Colo.	320	131	131	130	130	130	0
Conn.	10,521	2,289	2,371	2,468	1,679	1,465	1,457
Del.	0	10	10	10	0	0	0
D. C.	0	0	0	0	0	0	0
Fla.	185,723	56,009	49,273	47,638	47,275	42,731	44,001
Ga.	74,673	26,136	26,411	28,415	26,769	27,288	26,370
Idaho	30	10	0	m 0	0	0	0
Ill.	1,302	251	308	256	235	260	207
Ind.	975	322	315	608	300	328	354
Iowa	1,739	656	561	592	934	1,008	1,011
Kans.	243,873	67,967	57,259	58,316	64,123	66,797	61,542
Ky.	793	310	145	220	195	628	225
La.	131,010	35,538	41,521	40,077	38,223	40,383	38,411
Me.	4,033	3,939	2,807	2,283	2,581	2,709	3,990
Md.	0	0	0	0	0	0	0
Mass.	15,228	7,835	6,900	7,775	10,073	19,903	19,924
Mich.	410	122	57	74	88	109	106
Minn.	2,720	418	428	436	645	409	381
Miss.	27,631	9,569	10,159	9,824	11,757	8,214	8,197
Mo.	188,614	38,521	28,502	30,784	33,058	27,645	28,248
Mont.	77	27	r60	60	210	211	212
Nebr.	135,455	11,240	8,352	4,831	3,731	3,779	3,526
Nev.	4,896	170	170	170	170	170	170
N. H.	49	19	40	41	7	0	3
N. J.	340	90	75	74	90	86	97
N. Mex.	785	532	617	829	854	898	776
N. Y.	2,376	1,201	1,219	852	1,622	3,707	5,926
N. C.	102	36	104	151	121	100	120
N. Dak.	551	206	195	371	172	113	163
Ohio	1,805	558	572	615	600	543	n 540
Okla.	175,400	23,504	18,794	18,027	17,831	4,968	10,319
Oreg.	6,207	819	1,108	1,096	2,306	2,389	1,692
Pa.	335	528	101	21	6	0	0
R. I.	27,816	9,964	12,185	11,939	40,117	45,134	42,835
S. C.	0	0	0	0	25	0	0
S. Dak.	7,209	1,626	1,858	1,583	1,629	1,726	1,865
Tenn.	73	25	25	25	25	78	143
Texas	697,346	222,235	228,421	218,183	246,301	240,984	257,992
Utah	0	0	0	0	0	0	0
Vt.	6,020	1	0	0	912	2,658	1,773
Va.	330	137	163	160	89	180	130
Wash.	37,875	7,959	7,206	4,745	12,210	19,434	16,641
W. Va.	143	48	20	48	48	67	50
Wis.	1,902	508	366	577	254	264	225
Wyo.	26,586	8,351	6,195	5,020	5,296	5,320	5,993
Total	3,510,917	907,771	920,718	1,067,422	1,189,001	1,196,825	1,092,998

State	Natural gas - thousands of cubic feet						
	Jan.,Feb.&Mar.	April	May	June	July	August	Sept.
Ala.	0	0	0	0	0	0	0
Ariz.	0	0	0	0	0	0	0
Ark.	658,615	214,596	199,466	260,840	259,905	253,268	240,050
Calif.	535,486	172,180	228,096	229,181	335,652	441,388	439,908
Colo.	0	0	0	0	0	0	0
Conn.	0	0	0	0	0	0	0
Del.	0	0	0	0	0	0	0
D. C.	0	0	0	0	0	0	0
Fla.	0	0	0	0	0	0	0
Ga.	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0
Ill.	0	0	0	0	0	0	0
Ind.	6,075	2,025	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0	0	0
Kans.	218,956	85,107	120,240	137,528	223,797	194,118	221,192
Ky.	24,332	13,021	21,141	13,159	14,453	14,108	13,222
La.	200,895	81,517	81,074	90,147	99,290	97,047	97,236
Me.	0	0	0	0	0	0	0
Md.	4,400	1,500	424	461	441	399	591
Mass.	0	0	0	0	0	0	0
Mich.	0	0	0	0	0	0	0
Minn.	0	0	0	0	0	0	0
Miss.	0	0	0	0	0	0	0
Mo.	0	0	0	0	0	0	0
Mont.	3,474	1,105	1,093	994	1,086	1,134	1,180
Nebr.	0	0	0	0	0	0	0
Nev.	0	0	0	0	0	0	0
N. H.	0	0	0	0	0	0	0
N. J.	280a/	0	0	0	0	0	0
N. Mex.	0	0	0	0	0	0	0
N. Y.	64,450	5,839	6,169	10,849	10,217	16,711	7,685
N. C.	0	0	0	0	0	0	0
N. Dak.	0	0	0	0	0	0	0
Ohio	564,083b/	354,973c/	462,026d/	486,968e/	553,697f/	579,573g/	574,206h/
Okla.	845,484	393,644	508,494	428,816	496,246	576,488	570,852
Oreg.	0	0	0	0	0	0	0
Pa.	148,158	67,018	54,141	52,175	54,055	55,554	57,976
R. I.	0	0	0	0	0	0	0
S. C.	0	0	0	0	0	0	0
S. Dak.	0	0	0	0	0	0	0
Tenn.	0	0	0	0	0	0	0
Texas	163,118	72,815	95,409	187,515	165,873	154,267	161,387
Utah.	0	0	0	0	0	0	0
Vt.	0	0	0	0	0	0	0
Va.	0	0	0	0	0	0	0
Wash.	0	0	0	0	0	0	0
W. Va.	728,235	305,382	310,707	328,063	340,149	282,884	307,510
Wis.	0	0	0	0	0	0	0
Wyo.	9,470	3,190	3,190	2,000	2,870	3.120	5,000
Total	4,175,511	1,773,912	2,093,670	2,230,696	2,558,731	2,672,069	2,699,995

a/ Artificial gas.
b/ Includes 61,520 M cubic feet of artificial gas.
c/ " 59,171 " " " " " "
d/ " 85,110 " " " " " "
e/ " 94,826 " " " " " "
f/ " 129,879 " " " " " "
g/ " 119,455 " " " " " "
h/ " 117,811 " " " " " "

The quantities in the tables are based on returns received from about 3,000 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 94 per cent of the capacity of all plants listed. As shown by the accompanying curves, the average daily production of electricity in kilowatt-hours by public utility plants for the nine months was as follows: January, 124,700,000; February, 119,800,000; March, 120,700,000; April, 119,100,000; May 115,600,000; June, 118,800,000; July, 117,000,000; August, 119,700,000; and September, 120,200,000. The proportion of each monthly total produced by water power is 33, 33, 38, 41, 42, 40, 38, 37, and 37 per cent, respectively.

The total output for the nine-month period - January to September, 1919, - was 28,341,000,000 kilowatt-hours; for the same period in 1920, the output was 32,739,000,000 kilowatt-hours, an increase of 15.5 per cent.

The amount of fuels consumed by public utility plants in generating electricity from January to September, 1920, is as follows: Coal, 27.7 million short tons; fuel oil, 9.9 million barrels; and gas, 18.2 billion cubic feet.

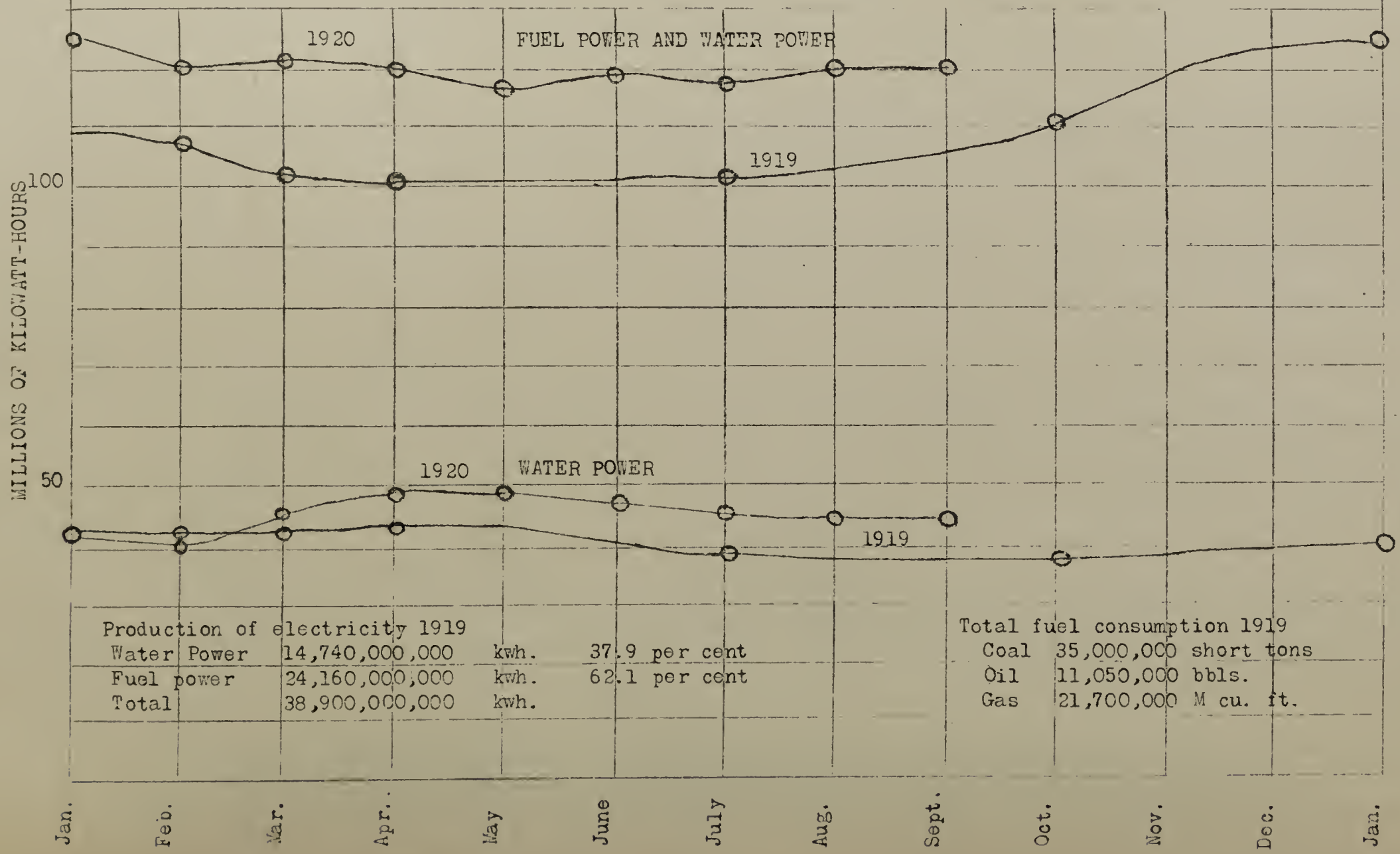
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in United States

Water Power and Fuel Power
1919 and 1920

(The average is obtained by dividing the total for the month by the number of days in the month.)



Production of electricity 1919			
Water Power	14,740,000,000	kwh.	37.9 per cent
Fuel power	24,160,000,000	kwh.	62.1 per cent
Total	38,900,000,000	kwh.	

Total fuel consumption 1919	
Coal	35,000,000 short tons
Oil	11,050,000 bbls.
Gas	21,700,000 M cu. ft.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
Washington

Office of the Director — January 5, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR THE MONTHS OF JAN., FEB., MAR., APR., MAY, JUNE, JULY, AUG., SEPT., AND OCT., 1920

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	Jan., Feb. & Mar.	Apr., May & June	July	August	September	October
Ala.	110,998	115,894	37,833	32,745	30,940	17,290
Ariz.	24,349	30,807	10,738	9,201	8,793	8,629
Ark.	382	297	112	132	115	113
Calif.	518,139	702,396	228,156	241,287	192,905	197,534
Colo.	37,516	45,975	16,491	16,508	17,610	19,192
Conn.	34,350	53,071	12,004	10,924	9,501	14,044
Del.	0	0	0	0	0	0
D. C.	0	0	0	0	0	a/
Fla.	2,807	2,814	1,284	1,294	1,227	1,313
Ga.	129,429	118,651	40,050	41,065	40,165	42,416
Idaho	134,972	157,641	56,632	56,149	49,926	43,433
Ill.	43,566	44,353	15,520	16,313	16,136	16,139
Ind.	9,331	10,975	2,701	2,091	2,129	1,731
Iowa	159,365	157,909	56,677	59,763	56,705	54,071
Kans.	4,579	6,185	1,970	1,710	2,165	1,933
Ky.	0	0	0	0	0	0
La.	0	0	0	0	0	0
Me.	83,791	86,257	27,061	28,721	27,593	28,932
Md.	742	743	205	210	148	126b/
Mass.	73,079	121,027	23,401	20,428	20,491	25,485
Mich.	160,000	185,843	53,930	51,572	48,135	55,245
Minn.	87,276	116,582	36,800	33,956	34,106	36,504
Miss.	0	0	0	0	0	0
Mo.	15,199	16,103	1,208	1,556	2,382	3,155
Mont.	284,976	288,293	94,610	98,821	94,369	92,867
Nebr.	2,239	2,871	1,361	1,311	1,348	1,314
Nev.	10,016	8,003	2,782	2,411	2,090	2,402
N. H.	13,550	16,794	4,630	4,770	4,538	4,967
N. J.	461	568	137	188	158	127
N. Mex.	169	234	77	53	60	73
N. Y.	678,424	764,446	246,677	244,432	241,904	248,226
N. C.	157,695	181,602	65,930	59,739	58,140	60,096
N. Dak.	0	0	0	0	0	0
Ohio	6,813	7,365	2,454	2,135	1,941	1,251
Okla.	584	238	175	163	174	201
Oreg.	93,118	95,226	28,512	25,502	29,935	34,074
Pa.	145,620	171,363	47,115	53,100	52,153	48,334
R. I.	1,510	2,358	416	258	199	161
S. C.	166,865	157,814	49,437	50,322	53,625	55,403
S. Dak.	2,113	4,532	1,627	1,342	1,372	1,320
Tenn.	107,697	119,091	40,278	33,784	35,534	36,351
Texas	685	919	316	359	332	491
Utah	46,465	46,548	17,556	18,725	17,494	21,233
Vt.	41,916	54,234	13,702	13,128	14,960	16,817
Va.	51,589	53,234	14,278	18,778	17,976	11,613
Wash.	296,735	280,802	92,307	92,241	94,727	100,415
W. Va.	6,211	6,692	1,568	1,349	1,760	1,337
Wis.	103,776	158,909	46,751	33,024	29,863	30,442
Wyo.	468	514	176	191	270	209
Total	3,849,555	4,406,673	1,393,655	1,382,256	1,316,596	1,337,079

a/ Included in Maryland.
b/ Includes District of Columbia.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	Jan., Feb., & Mar.	Apr., May & June	July	August	September	October
Ala.	32,075	27,542	8,918	13,461	15,576	22,261
Ariz.	11,973	13,681	4,543	4,530	4,104	5,023
Ark.	26,656	26,320	11,536	11,093	10,203	10,054
Calif.	305,552	222,371	123,037	132,236	133,306	110,809
Colo.	62,584	49,135	16,438	15,580	15,114	16,173
Conn.	152,381	111,850	43,202	43,326	44,515	41,360
Del.	19,208	17,635	6,099	6,334	6,064	6,556
D. C.	65,436	60,358	20,617	20,813	20,321	a/
Fla.	32,226	28,400	9,047	8,984	9,116	9,689
Ga.	27,726	25,148	7,770	7,952	8,396	9,252
Idaho	761	377	125b/	125b/	125b/	125b/
Ill.	747,993	682,123	217,068	231,209	223,377	242,130
Ind.	236,348	206,066	72,059	75,470	76,137	80,417
Iowa	91,938	77,085	28,026	29,784	30,929	32,029
Kans.	101,180	91,308	36,361	38,811	36,552	36,990
Ky.	67,941	64,826	21,046	22,627	23,714	24,381
La.	52,740	52,671	15,050	19,256	19,090	19,601
Me.	4,109	1,510	365	528	770	574
Md.	79,380	52,630	26,783	24,831	23,712	51,944c/
Mass.	402,413	315,192	109,413	117,336	113,019	109,501
Mich.	395,434	332,999	123,906	124,887	121,014	112,494
Minn.	89,339	81,741	12,970	25,406	29,464	32,964
Miss.	16,298	16,140	5,458	5,182	5,613	5,565
Mo.	160,822	150,431	50,838	52,011	53,680	58,260
Mont.	1,651	1,517	599	606	600	670
Nebr.	55,784	56,683	18,672	18,845	19,115	19,887
Nev.	2,579	218	73	72	75	46
N. H.	11,774	6,358	3,143	3,199	3,139	2,350
N. J.	274,643	258,870	86,897	90,091	89,739	92,463
N. Mex.	3,038	3,457	1,240	1,252	1,227	1,265
N. Y.	1,049,604	886,358	312,245	316,706	311,827	340,152
N. C.	29,440	26,734	9,729	9,168	9,798	10,711
N. Dak.	7,158	5,726	2,110	2,233	2,332	2,565
Ohio	746,752	717,951	234,762	243,202	237,895	245,904
Okla.	48,253	47,827	17,513	17,321	17,556	18,722
Oreg.	24,257	19,029	10,002	14,501	9,834	8,252
Pa.	958,003	883,518	293,343	304,289	301,841	320,956
R. I.	96,589	70,075	31,456	28,616	29,430	29,059
S. C.	15,307	12,852	4,333	4,436	4,632	4,773
S. Dak.	9,429	6,791	2,244	2,486	2,526	2,977
Tenn.	31,064	32,573	10,756	12,510	11,026	12,320
Texas	158,555	151,427	55,831	57,637	60,897	63,907
Utah	20	36	0	1	1	0
Vt.	2,168	311	191	541	233	157
Va.	76,899	68,917	27,115	24,201	25,974	35,909
Wash.	11,641	6,926	3,352	6,297	4,365	2,873
W. Va.	275,599	272,610	93,275	89,981	90,057	90,024
Wis.	139,816	109,366	36,461	45,142	46,363	48,352
Wyo.	12,504	11,613	2,810	3,037	3,150	3,343
Total	7,225,340	6,314,669	2,228,332	2,328,726	2,307,683	2,396,305
Total by water power	3,849,555	4,406,673	1,393,335	1,382,256	1,316,596	1,337,079
Total by water power and fuels	11,075,195	10,721,342	3,622,267	3,710,982	3,624,279	3,733,384

a/ Included in Maryland.
b/ Fuel output of Idaho entirely by wood.
c/ Includes District of Columbia

Kilowatt-hours of electricity produced by plants utilizing wood for fuel are as follows: California, 709,580; Florida, 120,356; Georgia, 333,336; Idaho, 125,000; Louisiana, 153,094; Minnesota, 826,924; Mississippi, 501,897; Oregon, 1,113,371; Washington, 856,035; Wisconsin, 585,989; all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, Texas, Virginia), 813,332.

Electric power produced in January, February, March, April, May, June, July, August, September, and October, 1920, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons					
	Jan., Feb. & Mar.	Apr., May & June	July	August	September	October
Ala.	64,719	48,648	15,593	20,052	22,695	31,093
Ariz.	786	1,614	39	315	759	803
Ark.	25,018	23,894	11,633	12,083	12,618	11,964
Calif.	0	0	0	0	0	0
Colo.	123,105	96,708	33,507	33,210	33,380	35,264
Conn.	207,627	158,727	61,176	62,031	62,643	60,693
Del.	29,187	28,646	9,856	10,164	10,042	9,422
D. C.	66,512	59,274	23,036	20,957	18,939	a/
Fla.	7,098	6,548	2,951	3,047	2,955	2,680
Ga.	40,699	28,736	8,022	8,042	9,045	9,938
Idaho	360	50	0	0	0	0
Ill.	1,181,766	1,024,005	331,418	346,220	345,756	369,972
Ind.	562,961	482,149	161,087	165,464	162,378	178,863
Iowa	275,114	227,160	78,165	80,172	80,719	84,359
Kans.	112,995	109,066	37,745	42,836	37,794	39,443
Ky.	122,924	114,297	38,944	40,439	40,080	41,827
La.	31,517	34,134	10,433	13,541	15,706	13,920
Me.	12,746	1,107	169	383	318	373
Md.	104,194	73,055	32,350	30,499	30,335	57,656b/
Mass.	467,686	358,346	125,087	133,233	129,089	122,903
Mich.	511,646	447,432	171,282	168,661	156,462	145,171
Minn.	164,514	78,414	26,896	40,060	44,882	50,292
Miss.	40,542	30,156	10,934	11,747	12,065	13,033
Mo.	282,830	278,698	96,502	93,623	98,936	107,832
Mont.	13,180	11,536	3,950	3,551	3,379	3,661
Nebr.	113,426	102,596	34,651	37,256	38,253	39,546
Nev.	727	668	219	215	242	296
N. H.	16,193	9,178	3,643	4,148	4,084	3,781
N. J.	422,909	378,059	123,989	127,050	125,287	132,145
N. Mex.	10,373	10,823	4,165	4,150	3,653	3,430
N. Y.	1,294,663	1,059,203	379,979	388,437	384,146	408,663
N. C.	60,492	53,837	17,951	18,425	19,513	21,074
N. Dak.	49,635	36,150	12,920	13,722	14,096	15,514
Ohio	1,136,969	989,992	325,828	324,712	320,195	330,427
Okla.	26,735	27,492	6,155	6,284	7,603	9,277
Oreg.	1,022	761	180	180	175	150
Pa.	1,524,076	1,324,361	440,807	445,684	453,908	483,064
R. I.	96,495	73,719	24,799	20,296	21,499	20,535
S. C.	32,481	27,301	8,851	9,116	9,940	10,124
S. Dak.	21,994	17,218	6,290	6,448	6,481	7,783
Tenn.	69,334	70,262	24,530	26,018	23,975	26,031
Texas	65,487	58,559	22,625	19,563	17,667	17,568
Utah	58	80	0	8	8	0
Vt.	4,439	649	357	604	315	278
Va.	114,591	98,544	40,320	34,403	38,681	47,265
Wash.	9,300	10,870	3,782	5,039	4,260	2,841
W. Va.	312,185	302,556	99,948	100,636	98,800	102,212
Wis.	236,972	196,812	64,848	75,339	78,252	82,325
Wyo.	37,659	33,372	7,664	8,546	9,339	9,406
Total	10,107,941	8,605,462	2,945,276	3,016,409	3,011,347	3,164,897

a/ Included in Maryland.
b/ Includes District of Columbia.

State	Fuel oil - barrels					
	Jan.,Feb.&Mar.	Apr.,May&June	July	August	September	October
Ala.	18,208	21,426	9,508	8,194	9,522	9,148
Ariz.	57,542	61,757	21,868	20,495	18,769	21,381
Ark.	12,870	17,519	15,138	9,559	533	601
Calif.	1,498,714	1,240,148	569,769	585,738	586,994	503,941
Colo.	320	392	130	130	130	130
Conn.	10,521	7,128	1,679	1,465	1,457	1,368
Del.	0	30	0	0	0	0
D. C.	0	0	0	0	0	0
Fla.	185,723	152,920	47,275	42,981	44,158	46,910
Ga.	74,673	80,962	26,769	27,288	27,437	28,626
Idaho	30	10	0	0	0	0
Ill.	1,302	815	235	260	207	261
Ind.	975	1,245	300	328	354	370
Iowa	1,739	1,809	934	1,008	1,034	1,177
Kans.	243,873	183,542	64,123	66,755	61,606	67,911
Ky.	793	675	195	628	225	220
La.	131,010	117,186	38,223	40,383	37,948	37,542
Me.	4,033	9,029	2,581	2,709	3,990	3,203
Md.	0	0	0	0	0	0
Mass.	15,228	22,510	10,073	19,903	19,924	19,921
Mich.	410	259	88	109	106	185
Minn.	2,720	1,282	645	409	381	382
Miss.	27,631	29,552	11,757	8,214	8,197	8,387
Mo.	188,614	97,807	33,805	28,175	28,749	23,951
Mont.	77	147	210	211	212	205
Nebr.	135,455	24,423	3,731	3,779	3,446	3,277
Nev.	4,896	510	170	170	170	0
N. H.	49	100	7	0	3	5
N. J.	340	239	90	86	97	101
N. Mex.	785	1,978	854	898	776	750
N. Y.	2,376	3,272	1,622	3,707	5,926	8,786
N. C.	102	291	121	100	120	125
N. Dak.	551	772	172	113	163	155
Ohio	1,805	1,745	600	543	540	555
Okla.	175,400	61,125	17,831	4,966	10,383	16,581
Oreg.	6,207	3,103	2,141	2,707	1,592	1,375
Pa.	385	650	6	0	0	0
R. I.	27,816	34,068	40,117	45,134	42,835	45,089
S. C.	0	0	25	0	10	0
S. Dak.	7,209	5,067	1,629	1,726	2,029	1,997
Tenn.	73	75	25	78	143	140
Texas	697,846	668,839	246,301	240,984	257,990	276,031
Utah	0	0	0	0	0	0
Vt.	6,020	1	912	2,658	1,773	1,104
Va.	380	460	89	180	130	130
Wash.	37,875	19,910	12,210	19,434	16,641	12,244
W. Va.	143	116	48	67	50	50
Wis.	1,602	1,451	254	264	225	262
Wyo.	26,596	19,566	5,296	5,320	5,993	6,477
Total	3,510,917	2,895,911	1,189,556	1,197,856	1,202,968	1,151,054

State	Natural gas - thousands of cubic feet					
	Jan., Feb. & Mar.	Apr., May & June	July	August	September	October
Ala.	0	0	0	0	0	0
Ariz.	0	0	0	0	0	0
Ark.	668,615	674,902	259,905	253,268	240,050	206,904
Calif.	535,486	629,457	335,652	441,388	419,059	274,218
Colo.	0	0	0	0	0	0
Conn.	0	0	0	0	0	0
Del.	0	0	0	0	0	0
D. C.	0	0	0	0	0	a/
Fla.	0	0	0	0	0	0
Ga.	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Ill.	0	0	0	0	0	0
Ind.	6,075	6,025	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0	0
Kans.	218,956	342,875	223,797	194,118	221,192	164,913
Ky.	24,332	47,321	14,453	14,108	13,222	13,610
La.	200,985	252,738	99,290	97,047	97,236	104,848
Me.	0	0	0	0	0	0
Md.	4,400	2,385	441	399	591	590b/
Mass.	0	0	0	0	0	0
Mich.	0	0	0	0	0	0
Minn.	0	0	0	0	0	0
Miss.	0	0	0	0	0	0
Mo.	0	0	0	0	0	0
Mont.	3,474	3,192	1,086	1,134	1,180	1,169
Nebr.	0	0	0	0	0	0
Nev.	0	0	0	0	0	0
N. H.	0	0	0	0	0	0
N. J.	280c/	0	0	0	0	0
N. Mex.	0	0	0	0	0	0
N. Y.	64,450	22,857	10,217	16,711	7,685	7,593
N. C.	0	0	0	0	0	0
N. Dak.	0	0	0	0	0	0
Ohio	564,083d/	1,303,967e/	553,697f/	579,573g/	573,753h/	579,697i/
Okla.	845,484	1,330,954	496,246	576,488	570,912	512,383
Oreg.	0	0	0	0	0	0
Pa.	148,158	173,334	54,055	55,554	57,818	57,042
R. I.	0	0	0	0	0	0
S. C.	0	0	0	0	0	0
S. Dak.	0	0	0	0	0	0
Tenn.	0	0	0	0	0	0
Texas	163,118	355,739	165,873	154,267	163,984	116,887
Utah	0	0	0	0	0	0
Vt.	0	0	0	0	0	0
Va.	0	0	0	0	0	0
Wash.	0	0	0	0	0	0
W. Va.	728,235	944,152	340,623	282,884	307,510	324,573
Wis.	0	0	0	0	0	0
Wyo.	9,470	8,330	2,870	3,120	5,000	4,160
Total	4,175,511	6,098,278	2,560,205	2,672,069	2,681,192	2,370,587

a/ Included in Maryland.
b/ Includes District of Columbia.
c/ Artificial gas.
d/ Includes 61,520 M cubic feet of artificial gas.
e/ " 239,107 " " " " " "
f/ " 129,879 " " " " " "
g/ " 119,455 " " " " " "
h/ " 117,811 " " " " " "
i/ " 119,218 " " " " " "

The quantities in the tables are based on returns received from about 3,000 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 94 per cent of the capacity of all plants listed. As shown by the accompanying curves, the average daily production of electricity in kilowatt-hours by public utility plants for the ten months was as follows: January, 124,700,000; February, 119,800,000; March, 120,700,000; April, 119,100,000; May, 115,600,000; June, 118,800,000; July, 116,800,000; August, 119,700,000; September, 120,800,000; and October, 120,400,000. The proportion of each monthly total produced by water power is 33, 33, 33, 41, 42, 40, 38, 37, 36, and 36 per cent, respectively.

The curve of average daily production of electricity for 1920 shows the reduction in the demand for power due to the slowing up of industries in the latter half of the year.

The total output for the ten-month period - January to October, 1919, - was 31,500,000,000 kilowatt-hours; for the same period in 1920, the output was 36,484,000,000 kilowatt-hours, an increase of 15.8 per cent. Based on the output for ten months and assuming but a slight increase in output, due to increasing hours of darkness, for November and December, the output for 1920 is estimated to be about 44 billion kilowatt-hours.

The amount of fuels consumed by public utility plants in generating electricity from January to October, 1920, is as follows: Coal, 30.8 million short tons; fuel oil, 11.0 million barrels; and gas, 20.6 billion cubic feet.

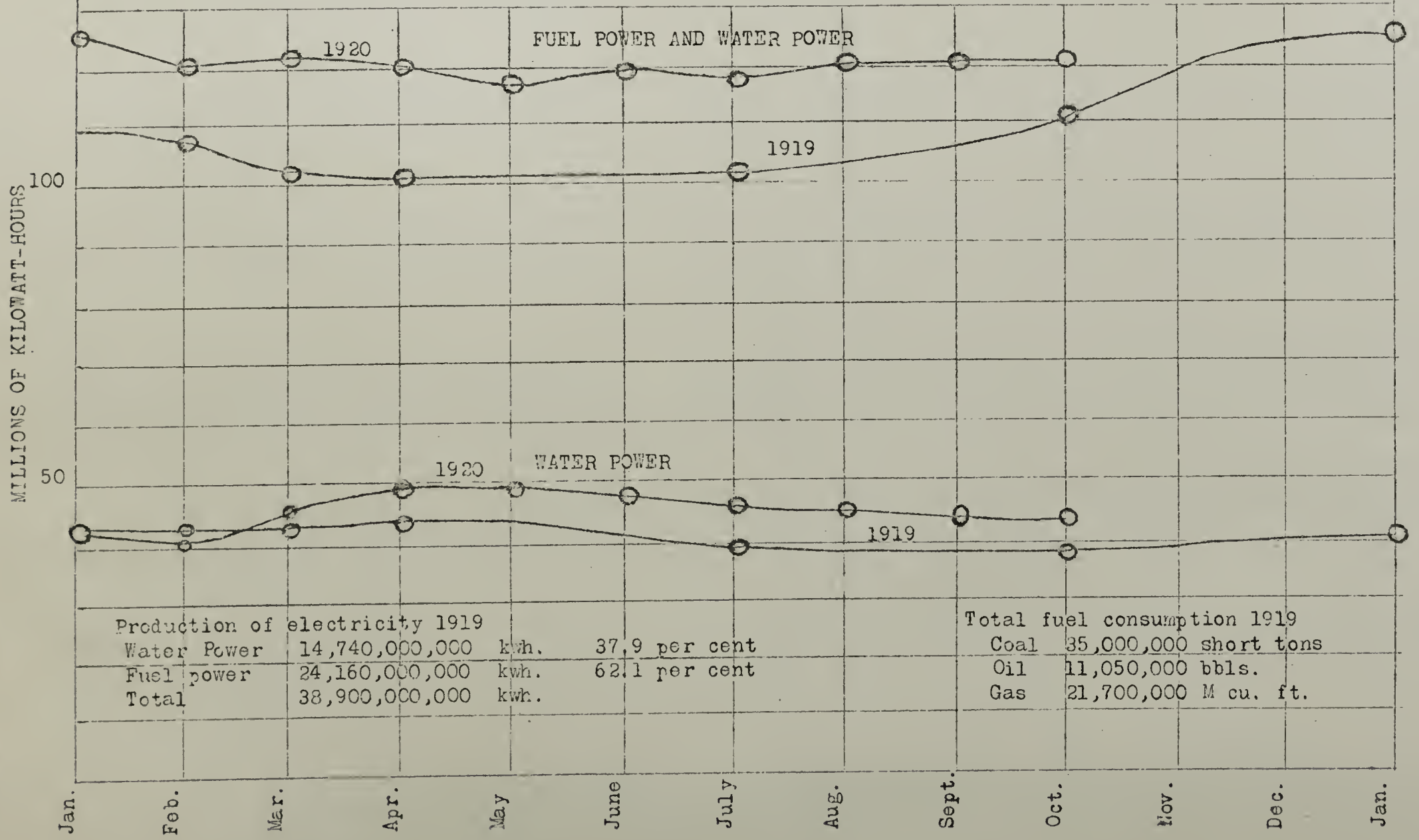
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in United States

Water Power and Fuel Power
1919 and 1920

(The average is obtained by dividing the total for the month by the number of days in the month.)



Production of electricity 1919			
Water Power	14,740,000,000	kwh.	37.9 per cent
Fuel power	24,160,000,000	kwh.	62.1 per cent
Total	38,900,000,000	kwh.	

Total fuel consumption 1919	
Coal	35,000,000 short tons
Oil	11,050,000 bbls.
Gas	21,700,000 M cu. ft.

338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
Washington

Office of the Director — January 28, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR THE MONTHS OF JAN., FEB., MAR., APR., MAY, JUNE, JULY, AUG., SEPT., OCT., AND NOV., 1920.

Compiled by
Division of Power Resources, United States Geological Survey.

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER						
	Jan., Feb. & Mar.	Apr., May & June	July	August	September	October	November
Ala.	110,998	115,894	37,833	32,745	30,940	17,290	19,735
Ariz.	24,349	30,807	10,728	9,201	8,793	8,629	7,417
Ark.	382	297	112	132	115	113	107
Calif.	518,139	702,396	228,156	241,287	192,906	196,851	229,073
Colo.	37,516	45,975	16,491	16,508	17,610	19,192	16,543
Conn.	34,350	53,071	12,004	10,924	9,501	14,044	15,665
Del.	0	0	0	0	0	0	0
D. C.	0	0	0	0	0	0	0
Fla.	2,807	2,814	1,284	1,294	1,227	1,313	1,292
Ga.	129,429	118,651	40,050	41,065	40,165	42,416	40,348
Idaho	134,972	157,641	56,984	56,149	49,926	43,433	42,213
Ill.	43,566	44,353	15,520	16,313	16,136	16,139	16,248
Ind.	9,321	10,975	2,701	2,091	2,129	1,731	2,259
Iowa	159,365	167,909	56,677	59,763	56,705	54,071	57,372
Kans.	4,579	6,185	1,970	1,710	2,165	1,933	1,502
Ky.	0	0	0	0	0	0	0
La.	0	0	0	0	0	0	0
Me.	83,791	86,257	27,061	28,720	27,593	29,189	30,544
Md.	742	743	205	210	153	132	194
Mass.	73,079	121,027	23,401	20,428	20,491	25,485	35,093
Mich.	160,000	185,843	53,930	51,572	48,135	55,245	55,934
Minn.	87,276	116,582	36,800	33,956	34,106	36,508	35,399
Miss.	0	0	0	0	0	0	0
Mo.	15,199	16,103	1,208	1,556	2,882	3,155	1,779
Mont.	284,976	288,293	94,610	98,821	94,369	92,867	84,928
Nebr.	2,239	2,871	1,361	1,311	1,348	1,314	1,263
Nev.	10,016	8,003	2,782	2,411	2,041	2,402	2,535
N. H.	13,550	16,794	4,630	4,770	4,538	4,967	5,415
N. J.	461	568	137	188	158	151	165
N. Mex.	169	234	77	58	60	73	78
N. Y.	678,424	764,446	246,677	244,432	241,948	248,290	255,822
N. C.	157,695	181,602	63,930	59,739	58,140	60,110	58,297
N. Dak.	0	0	0	0	0	0	0
Ohio	6,813	7,865	2,454	2,135	1,941	1,251	2,325
Okla.	584	238	175	163	174	201	193
Oreg.	93,118	95,226	28,512	25,502	28,982	34,074	30,927
Pa.	145,620	171,363	47,115	53,100	52,153	48,340	54,870
R. I.	1,510	2,358	416	258	199	161	381
S. C.	166,865	157,814	49,437	50,322	53,625	55,423	54,223
S. Dak.	2,113	4,532	1,627	1,342	1,372	1,320	1,256
Tenn.	107,697	119,091	40,278	33,784	35,534	36,351	34,601
Texas	685	919	316	359	332	491	492
Utah	46,465	46,548	17,558	18,725	17,494	21,233	22,547
Vt.	41,916	54,234	13,702	13,128	14,960	17,156	20,388
Va.	51,589	53,234	14,278	18,778	17,976	11,613	12,528
Wash.	296,735	280,802	92,307	92,241	94,727	100,415	95,975
W. Va.	6,211	6,692	1,568	1,849	1,760	1,337	1,565
Wis.	103,776	158,909	46,751	33,024	29,863	30,454	34,704
Wyo.	468	514	176	191	270	209	218
Total	3,849,555	4,406,673	1,393,987	1,382,256	1,315,642	1,337,072	1,384,413

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS						
	Jan., Feb. & Mar.	Apr., May & June	July	August	September	October	November
Ala.	32,075	27,542	8,718	13,461	15,576	22,262	22,809
Ariz.	11,973	13,681	4,543	4,530	4,104	5,009	4,538
Ark.	26,656	26,820	11,536	11,093	10,203	10,051	10,420
Calif.	305,552	222,371	123,037	132,236	133,306	110,891	65,280
Colo.	62,584	43,135	16,438	15,580	15,114	16,180	18,341
Conn.	152,381	111,850	43,202	43,826	44,515	41,360	40,311
Del.	19,208	17,635	6,099	6,334	6,064	6,556	6,634
D. C.	65,436	60,358	20,617	20,818	20,321	a/	a/
Fla.	32,226	28,400	9,047	8,984	9,116	9,689	10,547
Ga.	27,726	25,148	7,770	7,952	8,396	9,252	8,786
Idaho	761	377	125b/	125b/	125b/	125b/	130b/
Ill.	747,993	682,122	217,068	231,209	223,377	242,130	248,825
Ind.	236,648	206,066	72,643	75,470	76,137	80,691	84,443
Iowa	91,938	77,085	28,026	29,784	30,929	32,004	31,378
Kans.	101,180	91,308	36,359	38,693	36,579	37,006	39,318
Ky.	67,941	64,626	21,046	22,627	23,709	24,394	25,251
La.	52,740	52,671	15,050	19,256	19,090	19,556	19,267
Me.	4,109	1,510	365	528	770	574	491
Md.	79,680	52,630	26,783	24,831	23,715	51,947c/	45,085c/
Mass.	402,413	315,192	109,413	117,336	113,019	109,501	107,489
Mich.	395,434	332,999	123,906	124,887	121,016	112,454	109,166
Minn.	89,339	31,741	12,970	25,406	29,464	33,225	30,141
Miss.	16,298	16,140	5,458	5,182	5,613	5,629	5,652
Mo.	160,822	150,431	50,838	52,011	53,680	58,261	58,607
Mont.	1,651	1,517	599	606	621	686	705
Nebr.	55,784	56,686	18,672	18,845	19,115	19,886	20,335
Nev.	2,579	218	73	72	75	48	52
N. H.	11,774	6,658	3,143	3,199	3,199	2,858	2,597
N. J.	284,643	258,870	86,897	90,091	89,729	92,466	91,718
N. Mex.	3,038	3,457	1,240	1,252	1,227	1,265	1,283
N. Y.	1,049,604	886,358	312,245	316,706	311,848	340,165	338,898
N. C.	29,440	26,734	9,729	9,168	9,798	10,699	10,221
N. Dak.	7,158	5,726	2,110	2,232	2,332	2,599	2,867
Ohio	746,752	717,951	234,762	243,202	237,895	245,898	240,364
Okla.	48,253	47,827	16,277	17,279	17,614	18,708	17,667
Oreg.	24,257	19,029	10,002	14,501	9,839	8,252	10,897
Pa.	958,003	882,518	293,343	304,289	301,841	322,483	313,084
R. I.	96,589	70,675	31,456	28,616	29,430	29,059	21,669
S. C.	15,307	12,652	4,333	4,436	4,632	4,773	4,903
S. Dak.	9,429	6,791	2,244	2,486	2,526	2,990	3,044
Tenn.	31,064	32,573	10,756	12,510	11,026	12,315	12,032
Texas	158,555	151,427	55,812	57,319	60,813	63,984	61,420
Utah	20	36	0	1	1	0	20
Vt.	2,168	311	191	541	233	157	76
Va.	76,899	68,317	27,115	24,281	25,979	35,[illegible]4	33,328
Wash.	11,641	6,926	3,352	6,297	4,365	2,8[illegible]6	3,373
W. Va.	275,599	272,610	93,275	89,981	90,057	90,018	92,981
Wis.	129,816	109,366	36,461	45,144	46,367	48,348	43,123
Wyo.	12,504	11,618	2,810	3,037	3,150	3,343	3,386
Total	7,225,640	6,314,689	2,227,954	2,328,250	2,307,640	2,398,537	2,322,952
Total by water power	3,849,555	4,406,673	1,393,987	1,382,256	1,315,642	1,337,072	1,384,413
Total by water power and fuels	11075,195	10,721,362	3,621,941	3,710,506	3,623,282	3,735,609	3,707,365

a/ Included in Maryland.
b/ Fuel output of Idaho entirely by wood.
c/ Includes District of Columbia.

Kilowatt-hours of electricity produced by plants utilizing wood for fuel are as follows: California, 610,000; Florida, 139,000; Georgia, 325,000; Idaho, 130,000; Louisiana, 141,000; Minnesota, 605,000; Mississippi, 672,000; Oregon, 10,437,000; Washington, 836,000; Wisconsin, 595,000; and all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, Texas, Virginia), 642,000.

Electric power produced in January, February, March, April, May, June, July, August, September, October, and November, 1920, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons						
	Jan.,Feb. & Mar.	Apr.,May & June	July	August	September	October	November
Ala.	64,719	48,648	15,593	20,052	22,695	31,093	32,441
Ariz.	786	1,614	39	315	759	777	693
Ark.	25,018	23,894	11,633	12,083	12,618	11,814	11,799
Calif.	0	0	0	0	0	0	0
Colo.	123,105	96,708	33,507	33,210	33,380	35,264	36,750
Conn.	207,627	158,727	61,176	62,031	62,643	60,693	60,561
Del.	29,187	28,646	9,856	10,164	10,042	9,422	11,106
D. C.	66,512	59,274	23,036	20,957	18,939	a/	a/
Fla.	7,098	6,548	2,951	3,047	2,955	2,680	3,017
Ga.	40,699	28,736	8,022	8,042	9,045	9,938	9,441
Idaho	360	50	0	0	0	0	25
Ill.	1,181,766	1,024,005	331,418	346,220	345,696	369,952	385,302
Ind.	562,961	482,149	162,699	165,464	162,378	180,289	182,093
Iowa	275,114	227,160	78,165	80,172	80,415	84,439	87,365
Kans.	112,995	109,066	37,745	42,726	37,794	39,443	47,427
Ky.	122,924	114,297	38,944	40,439	40,123	41,917	43,845
La.	31,517	34,134	10,433	13,541	15,706	13,970	12,257
Me.	12,746	1,107	169	383	318	373	491
Md.	104,194	73,055	32,350	30,499	30,335	57,656b/	52,360b/
Mass.	1467,686	5358,346	1185,087	1333,233	1129,089	122,903	119,130
Mich.	511,646	447,432	171,282	168,661	156,461	145,034	130,261
Minn.	164,514	78,414	26,896	40,060	44,882	50,763	50,984
Miss.	40,542	30,156	10,934	11,747	12,065	13,093	13,172
Mo.	282,830	278,698	96,502	93,623	98,936	107,838	105,416
Mont.	13,180	11,536	3,950	3,551	3,469	3,710	4,033
Nebr.	113,426	102,596	34,651	37,256	38,253	39,542	41,843
Nev.	727	668	219	215	242	296	237
N. H.	16,193	9,178	3,643	4,148	4,084	3,781	3,631
N. J.	422,909	378,059	123,989	127,050	125,287	132,145	124,881
N. Mex.	10,373	10,823	4,165	4,150	3,653	3,430	3,565
N. Y.	1,294,663	1,059,203	379,979	388,437	384,236	408,516	412,544
N. C.	60,492	53,837	17,951	18,425	19,513	21,029	19,946
N. Dak.	49,635	36,150	12,920	13,722	14,006	15,539	17,432
Ohio	1,136,969	989,992	325,828	324,712	320,195	330,402	346,333
Okla.	26,735	27,492	6,155	6,275	7,603	9,197	9,301
Oreg.	1,022	761	180	180	175	150	156
Pa.	1,524,076	1,324,361	440,807	445,684	453,908	482,258	476,670
R. I.	96,495	73,719	24,799	20,296	21,499	20,535	16,727
S. C.	32,481	27,301	8,851	9,116	9,940	10,134	10,079
S. Dak.	21,994	17,218	6,290	6,448	6,411	7,826	7,809
Tenn.	69,334	70,262	24,530	26,018	23,975	26,106	25,839
Texas	65,487	58,559	22,625	19,563	17,987	18,089	18,481
Utah	58	80	0	8	8	0	50
Vt.	4,439	649	357	604	315	278	439
Va.	114,591	98,544	40,320	34,403	38,681	47,265	43,652
Wash.	9,300	10,870	3,782	5,039	4,260	2,841	3,600
W. Va.	312,185	302,556	99,948	100,636	98,800	102,212	99,412
Wis.	236,972	196,812	64,848	75,339	77,570	81,940	72,111
Wyo.	37,659	33,372	7,664	8,346	9,339	9,406	9,347
Total	10107,941	8,605,462	2,946,888	3,016,290	3,010,683	3,165,978	3,164,054

a/ Included in Maryland.
b/ Includes District of Columbia.

State	Fuel oil - barrels						
	Jan.,Feb. & Mar.	Apr.,May & June	July	August	September	October	November
Ala.	18,208	21,426	9,508	8,194	9,522	9,148	10,723
Ariz.	57,542	61,757	21,268	20,495	18,769	21,381	18,787
Ark.	12,870	17,519	15,138	9,559	7,113	8,977	7,835
Calif.	1,498,714	1,240,148	569,769	585,738	589,129	512,055	321,946
Colo.	320	392	130	130	130	180	54
Conn.	10,521	7,128	1,679	1,465	1,457	1,368	1,354
Del.	0	30	0	0	0	0	0
D. C.	0	0	0	0	0	0	0
Fla.	185,723	152,920	47,275	42,981	44,158	46,910	51,753
Ga.	74,673	80,962	26,769	27,288	27,437	28,626	19,663
Idaho	30	10	0	0	0	0	0
Ill.	1,302	815	235	260	207	261	230
Ind.	975	1,245	300	328	354	370	412
Iowa	1,739	1,809	934	1,008	1,034	1,177	962
Kans.	243,873	183,542	64,652	65,196	60,334	67,861	68,840
Ky.	793	675	195	628	225	220	240
La.	131,010	117,186	38,223	40,383	37,948	37,172	40,988
Me.	4,033	9,029	2,581	2,709	3,990	3,203	2,915
Md.	0	0	0	0	15	18	17
Mass.	15,228	22,510	10,073	19,903	19,924	19,921	23,274
Mich.	410	259	88	109	106	185	131
Minn.	2,720	1,282	645	409	381	382	396
Miss.	27,631	29,552	11,757	8,214	8,197	8,387	8,316
Mo.	188,614	97,807	33,805	28,175	28,749	23,952	29,200
Mont.	77	147	210	211	212	195	213
Nebr.	135,455	24,423	3,731	3,779	3,446	3,277	2,869
Nev.	4,896	510	170	170	170	0	0
N. H.	49	100	7	0	3	5	12
N. J.	340	239	90	86	97	101	97
N. Mex.	785	1,978	854	898	776	750	649
N. Y.	2,376	3,272	1,622	3,707	5,926	8,786	7,186
N. C.	102	291	121	100	120	125	150
N. Dak.	551	772	172	113	163	155	151
Ohio	1,805	1,745	600	543	540	555	555
Okla.	175,400	61,125	17,831	4,701	10,118	16,581	27,160
Oreg.	6,207	3,103	2,141	2,707	1,592	1,375	1,622
Pa.	385	650	6	0	0	0	135
R. I.	27,816	34,068	40,117	45,134	42,835	45,089	37,973
S. C.	0	0	25	0	10	0	35
S. Dak.	7,209	5,067	1,629	1,726	2,029	1,997	2,189
Tenn.	73	75	25	78	143	0	0
Texas	697,846	668,839	246,291	240,974	257,980	268,306	253,685
Utah	0	0	0	0	0	0	0
Vt.	6,020	1	912	2,658	1,773	1,104	32
Va.	380	460	89	180	130	130	933
Wash.	37,875	19,910	12,210	19,434	16,641	12,244	10,999
W. Va.	143	116	48	67	50	50	50
Wis.	1,602	1,451	254	271	243	235	291
Wyo.	26,596	19,566	5,296	5,320	5,993	6,477	7,346
Total	3,510,917	2,895,911	1,190,075	1,196,029	1,208,034	1,159,291	962,368

State	Natural gas - thousands of cubic feet						
	Jan.,Feb. & Mar.	Apr.,May & June	July	August	September	October	November
Ala.	0	0	0	0	0	0	0
Ariz.	0	0	0	0	0	0	0
Ark.	658,615	674,902	259,905	253,268	240,050	206,904	188,612
Calif.	535,486	629,457	335,652	441,388	419,059	274,218	164,047
Colo.	0	0	0	0	0	0	0
Conn.	0	0	0	0	0	0	0
Del.	0	0	0	0	0	0	0
D. C.	0	0	0	0	0	0	0
Fla.	0	0	0	0	0	0	0
Ga.	0	0	0	0	0	0	0
Idaho	0	0	0	0	0	0	0
Ill.	0	0	0	0	0	0	0
Ind.	6,075	6,025	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0	0	0
Kans.	218,956	342,875	226,182	195,780	217,663	164,913	58,029
Ky.	24,332	47,321	14,453	14,108	12,558	13,610	18,229
La.	200,985	252,738	99,290	97,047	97,236	104,848	105,648
Me.	0	0	0	0	0	0	0
Md.	4,400	2,385	441	399	591	590	590
Mass.	0	0	0	0	0	0	0
Mich.	0	0	0	0	0	0	0
Minn.	0	0	0	0	0	0	0
Miss.	0	0	0	0	0	0	0
Mo.	0	0	0	0	0	0	0
Mont.	3,474	3,192	1,086	1,134	1,180	1,169	1,431
Nebr.	0	0	0	0	0	0	0
Nev.	0	0	0	0	0	0	0
N. H.	0	0	0	0	0	0	0
N. J.	280a/	0	0	0	0	0	0
N. Mex.	0	0	0	0	0	0	0
N. Y.	64,450	22,857	10,217	16,711	7,685	7,593	14,794
N. C.	0	0	0	0	0	0	0
N. Dak.	0	0	0	0	0	0	0
Ohio	564,083b/	1,303,967c/	553,697d/	579,573e/	573,753f/	579,909g/	416,576h/
Okla.	845,484	1,330,954	496,246	576,488	570,912	512,383	396,496
Oreg.	0	0	0	0	0	0	0
Pa.	148,158	173,334	54,055	55,554	57,818	59,882	61,195
R. I.	0	0	0	0	0	0	0
S. C.	0	0	0	0	0	0	0
S. Dak.	0	0	0	0	0	0	0
Tenn.	0	0	0	0	0	0	0
Texas	163,118	355,739	165,873	154,267	163,984	122,116	115,191
Utah	0	0	0	0	0	0	0
Vt.	0	0	0	0	0	0	0
Va.	0	0	0	0	0	0	0
Wash.	0	0	0	0	0	0	0
W. Va.	728,235	944,152	340,623	282,884	307,510	324,478	308,742
Wis.	0	0	0	0	0	0	0
Wyo.	9,470	8,380	2,870	3,120	5,000	4,160	4,065
Total	4,175,511	6,098,278	2,562,590	2,673,721	2,676,999	2,378,773	1,855,845

a/ Artificial gas.
b/ Includes 61,520 M cubic feet of artificial gas.
c/ " 239,107 " " " " " "
d/ " 129,879 " " " " " "
e/ " 119,455 " " " " " "
f/ " 117,811 " " " " " "
g/ " 119,218 " " " " " "
h/ " 125,112 " " " " " "

The quantities in the tables are based on returns received from about 3,000 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 9[illegible] per cent of the capacity of all plants listed. As shown by the accompanying curves, the average daily production of electricity in kilowatt-hours by public utility plants for the eleven months was as follows: January, 124,700,000; February, 119,800,000; March, 120,700,000; April, 119,100,000; May, 115,600,000; June, 118,800,000; July, 116,800,000; August, 119,700,000; September, 120,800,000; October, 120,400,000; and November, 123,600,000. The proportion of each monthly total produced by water power is 33, 33, 38, 41, 42, 40, 38, 37, 36, 36, and 37 per cent, respectively.

The curve of average daily production of electricity for 1920 shows the reduction in the demand for power due to the slowing up of industries in the latter half of the year. The gain in November is probably due to the increased use of electricity for lighting purposes on account of the decrease in the hours of daylight.

Based on the output for eleven months and assuming the same rate of increase for December as for November, the total output for 1920 is estimated to be about [illegible].1 billion kilowatt-hours - an increase of about 13.4 per cent over the output for 191[illegible].

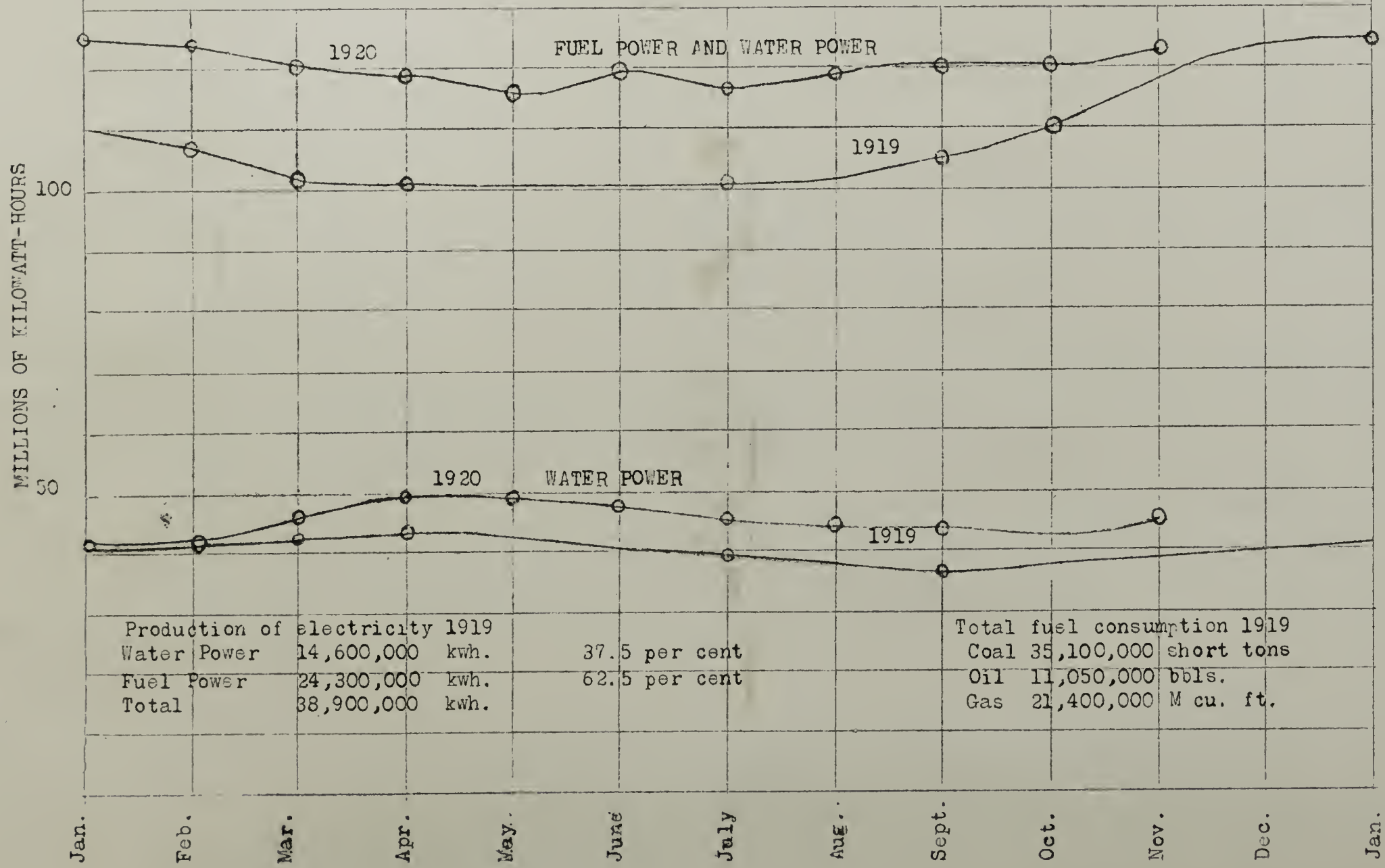
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared by A. H. Horton.

Avergo Daily Production of Electricity by Public Utility Plants in the United States

Water Power and Fuel Power
1919 and 1920

(The average is obtained by dividing the total for the month by the number of days in the month.)



Production of electricity 1919		
Water Power	14,600,000 kwh.	37.5 per cent
Fuel Power	24,300,000 kwh.	62.5 per cent
Total	38,900,000 kwh.	

Total fuel consumption 1919	
Coal	35,100,000 short tons
Oil	11,050,000 bbls.
Gas	21,400,000 M cu. ft.

338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
Washington

Office of the Director — March 2, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR EACH MONTH DURING 1920.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	Jan., Feb. & Mar.	Apr., May & June	July, Aug. & Sept.	October	November	December
Ala.	110,998	115,894	101,518	17,290	19,735	33,937
Ariz.	24,349	30,807	28,722	8,629	7,417	6,603
Ark.	382	297	359	113	107	115
Calif.	520,247	703,100	662,349	196,851	229,342	256,652
Colo.	37,516	45,975	50,609	19,192	16,512	14,870
Conn.	34,350	53,071	32,429	14,044	15,719	19,493
Del.	0	0	0	0	0	0
D. C.	0	0	0	0	0	0
Fla.	2,807	2,814	3,805	1,313	1,292	959
Ga.	129,429	118,651	121,280	42,416	40,348	38,957
Idaho	135,954	158,465	163,059	43,427	42,210	46,030
Ill.	43,566	44,353	47,969	16,139	16,248	16,380
Ind.	9,321	10,975	6,921	1,731	2,259	3,623
Iowa	159,365	167,909	173,145	54,071	57,372	50,646
Kans.	4,996	5,741	5,329	1,933	1,507	1,191
Ky.	0	0	0	0	0	0
La.	0	0	0	0	0	0
Me.	83,791	86,257	83,374	29,189	30,544	30,564
Md.	759	764	575	132	194	450
Mass.	73,079	121,027	64,320	25,485	35,093	39,297
Mich.	160,012	135,843	153,637	55,256	55,958	61,010
Minn.	87,276	116,581	104,862	36,508	35,399	33,965
Miss.	0	0	0	0	0	0
Mo.	15,199	16,103	5,646	3,155	1,779	4,162
Mont.	285,664	288,293	287,800	92,867	84,928	79,353
Nebr.	2,239	2,871	4,020	1,314	1,263	822
Nev.	10,016	8,003	7,234	2,402	2,535	2,500
N. H.	13,550	16,794	13,968	4,979	5,420	6,233
N. J.	446	568	483	151	165	254
N. Mex.	169	237	195	73	78	76
N. Y.	678,424	764,446	733,057	248,290	255,822	248,988
N. C.	157,695	181,602	181,809	60,110	58,297	47,919
N. Dak.	0	0	0	0	0	0
Ohio	6,813	7,865	6,530	1,251	2,325	3,030
Okla.	584	238	512	201	193	278
Oreg.	93,137	95,248	82,996	34,089	30,927	34,470
Pa.	145,611	171,381	152,368	48,340	54,870	60,341
R. I.	1,510	2,358	873	161	381	703
S. C.	166,865	157,814	153,384	55,423	54,157	48,726
S. Dak.	2,113	4,532	4,341	1,320	1,256	1,000
Tenn.	107,697	119,091	109,596	36,351	34,601	33,698
Texas	685	919	1,007	491	402	431
Utah	47,046	46,548	53,775	21,233	22,547	21,146
Vt.	41,914	54,234	41,830	17,156	20,482	19,586
Va.	51,592	53,234	51,032	11,613	12,528	22,767
Wash.	296,819	280,848	279,286	100,442	96,037	100,703
W. Va.	6,211	6,692	5,177	1,337	1,565	1,568
Wis.	98,505	153,204	109,761	30,454	34,712	36,604
Wyo.	468	514	637	209	218	225
Total	3,849,169	4,402,161	4,091,582	1,337,131	1,384,834	1,430,327

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	Jan., Feb. & Mar.	Apr., May & June	July, Aug. & Sept.	October	November	December
Ala.	32,075	27,542	37,755	22,262	22,609	7,853
Ariz.	11,973	13,729	13,177	5,009	4,539	4,245
Ark.	26,656	26,820	32,832	10,059	10,430	10,540
Calif.	305,871	222,398	388,579	110,447	64,950	56,723
Colo.	62,586	49,135	47,132	16,180	18,341	19,207
Conn.	152,381	111,850	131,543	41,360	40,311	37,881
Del.	19,208	17,635	18,497	6,556	6,634	7,045
D. C.	65,436	60,358	61,756	a/	a/	a/
Fla.	32,227	28,400	27,147	9,689	10,547	11,643
Ga.	27,726	25,148	24,118	9,252	8,785	7,996
Idaho	761	377	375	125b/	130	118b/
Ill.	747,993	682,122	671,654	242,130	248,774	265,363
Ind.	238,344	207,743	225,449	81,317	80,039	78,903
Iowa	91,966	77,029	88,739	32,004	31,443	33,154
Kans.	100,911	91,272	111,141	37,220	39,461	37,143
Ky.	67,941	64,626	67,382	24,394	25,237	26,176
La.	52,740	52,671	53,396	19,556	19,247	20,831
Me.	4,109	1,510	1,663	574	491	360
Md.	79,680	52,632	75,334	51,947c/	45,092c/	43,426c/
Mass.	402,413	315,192	339,768	109,501	107,498	107,169
Mich.	395,434	332,999	369,809	111,990	108,414	102,457
Minn.	89,342	31,741	67,840	33,225	30,141	34,069
Miss.	16,298	16,140	16,378	5,589	5,652	5,607
Mo.	160,822	150,464	156,544	58,272	58,661	67,334
Mont.	1,651	1,517	1,826	686	705	726
Nebr.	55,820	56,686	56,632	19,886	20,355	25,263
Nev.	274	218	220	48	52	47
N. H.	11,774	6,658	9,531	2,858	2,597	2,268
N. J.	285,825	258,870	266,717	92,466	91,736	98,422
N. Mex.	3,038	3,457	3,719	1,265	1,283	1,348
N. Y.	1,049,814	886,400	940,799	340,196	338,975	353,051
N. C.	23,440	26,734	27,850	10,699	10,221	9,589
N. Dak.	7,232	5,785	6,748	2,599	2,867	3,028
Ohio	746,807	717,965	715,856	245,942	240,309	235,095
Okla.	48,253	47,800	51,394	18,713	17,826	18,387
Oreg.	24,262	19,193	34,342	8,243	10,897	7,739
Pa.	958,052	882,518	898,537	322,656	307,842	310,018
R. I.	96,589	70,675	89,502	29,059	21,669	20,218
S. C.	15,307	12,652	13,401	4,773	4,865	4,574
S. Dak.	9,521	6,791	7,256	2,992	3,092	3,801
Tenn.	30,848	32,465	33,491	11,953	11,447	11,377
Texas	158,967	151,762	173,944	63,984	61,913	63,190
Utah	20	36	2	0	20	0
Vt.	2,168	311	965	157	76	77
Va.	76,945	68,317	77,020	35,914	33,356	26,520
Wash.	11,623	6,931	14,014	2,879	3,337	3,806
W. Va.	275,599	272,610	273,313	97,197	92,981	92,986
Wis.	129,556	108,824	127,983	48,348	43,123	39,204
Wyo.	12,504	11,618	8,997	3,343	3,386	4,605
Total	7,226,782	6,316,326	6,863,067	2,405,514	2,312,556	2,330,582
Total by water power	3,849,169	4,402,161	4,091,582	1,337,131	1,384,834	1,430,327
Total by water power and fuels	11,075,951	10,718,487	10,954,649	3,742,645	3,697,390	3,760,909

a/ Included in Maryland.
b/ Fuel output of Idaho entirely by wood.
c/ Includes District of Columbia.

Kilowatt-hours of electricity produced by plants utilizing wood for fuel are as follows: California, 437,020; Florida, 141,173; Georgia, 405,993; Idaho, 118,200; Louisiana, 146,544; Minnesota, 535,418; Mississippi, 985,575; Oregon, 5,906,371; Washington, 819,215; Wisconsin, 640,801; and all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, Virginia), 323,225.

Electric power produced during 1920 required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons					
	Jan., Feb. & Mar.	Apr., May & June	July, Aug. & Sept.	October	November	December
Ala.	64,719	48,648	58,340	31,093	32,441	12,993
Ariz.	786	1,614	1,113	777	693	555
Ark.	25,018	23,894	36,334	11,814	11,799	14,160
Calif.	0	0	0	0	0	0
Colo.	123,105	96,708	100,097	35,264	36,750	38,604
Conn.	207,627	158,727	185,850	60,693	60,561	56,875
Del.	29,171	28,646	30,062	9,425	11,106	11,390
D. C.	66,512	59,274	62,932	a/	a/	a/
Fla.	7,098	6,548	8,953	2,680	3,017	2,733
Ga.	40,699	28,746	25,109	9,938	9,428	7,985
Idaho	360	50	0	0	25	0
Ill.	1,181,766	1,024,005	1,023,334	369,952	386,365	409,073
Ind.	566,609	494,881	493,811	181,981	183,769	182,799
Iowa	275,246	226,489	238,752	84,439	87,337	90,052
Kans.	112,885	108,916	118,165	39,493	47,436	45,816
Ky.	122,924	114,302	119,506	41,917	43,720	44,756
La.	31,517	34,134	39,680	13,970	12,257	13,439
Me.	7,746	1,107	870	373	491	398
Md.	104,194	73,055	93,184	57,656b/	52,395b/	50,632b/
Mass.	467,686	358,346	387,409	122,903	119,148	120,870
Mich.	511,646	447,432	496,404	144,516	130,018	132,342
Minn.	165,696	78,414	111,838	50,763	50,984	56,851
Miss.	40,542	30,156	35,096	13,093	13,172	12,650
Mo.	283,287	278,698	289,101	107,868	105,496	125,585
Mont.	13,180	11,536	10,970	3,710	4,033	4,036
Nebr.	113,426	102,596	110,160	39,542	41,843	43,351
Nev.	727	668	676	296	237	243
N. H.	16,193	9,178	11,875	3,781	3,631	3,492
N. J.	424,064	378,059	376,326	132,145	122,574	134,350
N. Mex.	10,373	10,823	11,968	3,430	3,565	4,028
N. Y.	1,293,535	1,059,087	1,152,652	408,565	412,673	420,745
N. C.	60,492	53,837	55,889	21,029	19,946	18,256
N. Dak.	49,895	36,370	40,903	15,539	17,432	18,993
Ohio	1,137,615	990,526	971,559	330,844	346,022	334,909
Okla.	26,735	27,525	20,153	9,207	9,311	9,166
Oreg.	1,022	761	535	150	156	155
Pa.	1,523,975	1,324,361	1,341,662	481,647	476,145	476,420
R. I.	96,495	73,719	66,594	20,535	16,727	15,776
S. C.	32,481	27,301	27,907	10,134	10,019	9,502
S. Dak.	21,998	17,218	19,149	7,835	7,809	8,145
Tenn.	69,284	70,062	74,065	26,001	25,639	24,103
Texas	65,487	58,694	60,175	18,089	18,676	20,117
Utah	58	80	16	0	50	8
Vt.	4,439	649	1,276	278	439	468
Va.	114,837	98,544	113,004	47,265	43,551	39,120
Wash.	9,300	10,870	13,081	2,841	3,560	4,239
W. Va.	312,185	302,556	299,384	102,212	99,412	98,971
Wis.	232,541	194,492	217,757	81,940	72,111	68,533
Wyo.	37,659	33,372	25,349	9,406	9,347	13,095
Total	10,104,835	8,615,674	8,979,025	3,167,029	3,163,316	3,200,779

a/ Included in Maryland.
b/ Includes District of Columbia.

The quantities in the tables are based on returns received from about 3,000 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 94 per cent of the capacity of all plants listed.

The mean daily output of electricity for each month during 1920 was as follows:

Month	Average daily output Kilowatt-hours	Produced by water power Per cent	Month	Average daily output Kilowatt-hours	Produced by water power Per cent
January	124,700,000	33	July	116,800,000	38
February	119,800,000	33	August	119,700,000	37
March	120,700,000	38	September	120,800,000	36
April	119,100,000	41	October	120,700,000	36
May	115,600,000	42	November	123,200,000	37
June	118,800,000	40	December	121,000,000	38
			Year	120,000,000	37.6

The mean daily output by water power and by water and fuel power for 1919 and 1920 is shown graphically on page 7. The curve of total output for 1920 shows the reduction in the production of electricity caused by the slowing up of industry the latter part of the year.

The following tables show comparative figures of electricity generated and fuel consumed for 1919 and 1920 by public utility power plants:

Production of electricity

	Water Power			Fuel Power		
	Kilowatt-hours	Per cent of total	Increase (per cent)	Kilowatt-hours	Per cent of total	Increase (per cent)
1919	14,600,000,000	37.5		24,300,000,000	62.5	
1920	16,500,000,000	37.6	13.0	27,400,000,000	62.4	12.8

Totals

	Kilowatt-hours	Increase (per cent)
1919	38,900,000,000	
1920	43,900,000,000	12.9

Consumption of fuels

	Coal	Increase	Fuel oil	Increase	Gas	Increase
	Short tons	(per cent)	Barrels	(per cent)	Cubic feet	(per cent)
1919	35,100,000		11,050,000		21,400,000,000	
1920	37,200,000	6.0	13,080,000	18.4	24,300,000,000	13.6

These figures show that the production of electricity by public utility plants in 1920 was 43,900,000,000 kilowatt hours, an increase of practically 13 per cent over 1919. The percentage of the total kilowatt-hours of electricity produced by water power is the same for both years.

The consumption of coal, fuel oil, and gas increased 6.0, 18.4, and 13.6 per cent, respectively. The increase in the use of fuel oil as compared with coal is a matter of interest.

If the fuel oil, gas, and wood consumed in generating electricity is converted to equivalent coal, the coal consumption in 1919 would be 38,500,000 tons; in 1920 it would be 41,200,000 tons - a gain of 7 per cent. The gain in the production of electricity for the same period was 12.8 per cent, which indicates an increase of efficiency in the consumption of fuels during 1920. On the basis of equivalent coal consumed for each of the two years, a kilowatt-hour of electricity was produced in public utility plants in 1919 by 3.17 pounds of coal; in 1920 by 3.01 pounds of coal. These figures show a gain in economy of fuel consumption of 5 per cent, or a saving of about 2,000,000 tons of coal in the production of electricity in 1920 as compared with the rate of fuel consumption per kilowatt-hour in 1919. The coal required to produce the kilowatt-hours generated by water power in 1920 would be about 25,000,000 tons.

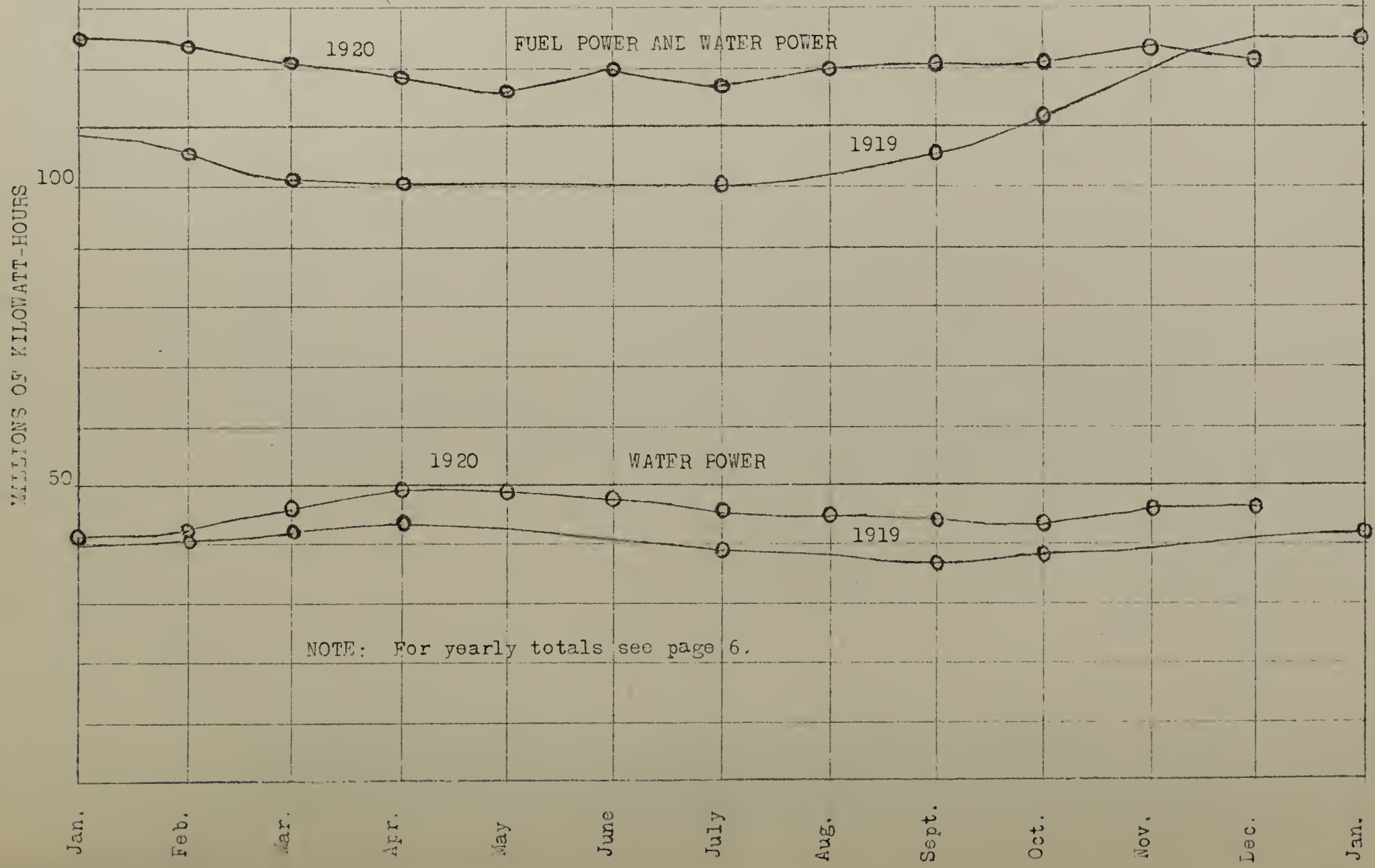
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power and Fuel Power
1919 and 1920

(The average is obtained by dividing the total for the month by the number of days in the month.)



NOTE: For yearly totals see page 6.

1 2 .

338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

April 5, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL
BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
FOR OCTOBER, NOVEMBER, AND DECEMBER, 1920, AND JANUARY, 1921.

Compiled by

Division of Power Resources, United States Geological Survey.

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER			
	October	November	December	January
Alabama	17,290	19,735	33,937	35,930
Arizona	8,629	7,417	6,603	6,722
Arkansas	113	107	115	104
California	196,851	229,342	256,652	253,412
Colorado	19,192	16,512	14,870	15,104
Connecticut	14,044	15,719	19,493	16,176
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	1,313	1,292	959	1,138
Georgia	42,416	40,348	38,957	38,960
Idaho	43,384	42,061	45,872	46,512
Illinois	16,139	16,248	16,380	11,170
Indiana	1,731	2,259	3,623	3,115
Iowa	54,071	57,372	50,648	50,395
Kansas	1,933	1,507	1,191	1,712
Kentucky	0	0	0	0
Louisiana	0	0	0	0
Maine	29,189	30,544	30,564	33,043
Maryland	132	194	450	275
Massachusetts	25,485	35,093	39,297	35,734
Michigan	55,256	55,958	61,055	61,074
Minnesota	36,508	33,616	31,274	29,119
Mississippi	0	0	0	0
Missouri	3,155	1,779	4,162	3,291
Montana	92,867	84,928	79,353	70,484
Nebraska	1,314	1,263	830	1,157
Nevada	2,402	2,535	2,500	2,570
New Hampshire	4,979	5,420	6,233	14,573
New Jersey	151	165	254	243
New Mexico	73	78	76	70
New York	248,565	256,097	249,264	218,032
North Carolina	61,843	60,145	49,800	46,960
North Dakota	0	0	0	0
Ohio	1,251	2,325	3,030	1,820
Oklahoma	201	193	278	270
Oregon	34,089	30,927	34,470	35,082
Pennsylvania	48,340	54,870	60,341	51,003
Rhode Island	161	381	703	713
South Carolina	58,815	57,593	52,483	54,068
South Dakota	1,320	1,256	1,000	737
Tennessee	36,351	34,601	33,698	33,782
Texas	491	492	431	383
Utah	21,243	22,547	21,133	18,105
Vermont	17,296	20,482	19,586	10,108
Virginia	11,613	12,528	22,783	21,689
Washington	100,442	96,037	100,703	101,231
West Virginia	1,337	1,565	2,424	2,456
Wisconsin	30,458	34,716	36,608	34,866
Wyoming	209	218	225	206
Total	1,342,642	1,388,465	1,434,308	1,363,594

State	THOUSANDS OF KILOWATTS PRODUCED BY FUELS			
	1920			1921
	October	November	December	January
Alabama	22,262	22,809	7,853	5,006
Arizona	5,009	4,539	4,274	3,659
Arkansas	10,059	10,430	10,540	10,511
California	111,699	64,954	56,726	51,070
Colorado	16,187	18,348	19,217	17,511
Connecticut	41,360	40,311	37,881	38,826
Delaware	6,556	6,634	7,045	6,472
District of Columbia	21,552	22,066	23,781	23,385
Florida	9,689	10,547	11,631	11,693
Georgia	9,430	8,918	8,099	7,062
Idaho	125	130	118	125
Illinois	242,130	248,774	265,363	248,159
Indiana	81,317	80,039	79,400	74,376
Iowa	32,004	31,443	33,154	32,553
Kansas	37,237	39,455	37,128	34,709
Kentucky	24,394	25,241	26,176	25,137
Louisiana	19,556	19,252	20,839	19,808
Maine	574	491	360	87
Maryland	30,395	23,026	18,780	18,203
Massachusetts	109,510	107,507	107,178	106,038
Michigan	111,990	108,414	102,457	90,486
Minnesota	33,225	32,481	38,569	36,287
Mississippi	5,589	5,602	5,607	5,303
Missouri	58,272	58,673	67,394	59,139
Montana	686	705	726	685
Nebraska	19,894	20,317	25,264	20,811
Nevada	48	52	47	46
New Hampshire	2,858	2,597	2,268	2,358
New Jersey	92,453	91,705	98,409	87,080
New Mexico	1,265	1,283	1,371	1,304
New York	340,196	338,940	353,070	347,084
North Carolina	11,218	10,748	10,166	9,859
North Dakota	2,599	2,867	3,028	2,896
Ohio	245,942	240,309	235,095	221,197
Oklahoma	19,675	13,830	19,454	17,618
Oregon	8,243	10,897	7,739	6,431
Pennsylvania	322,656	307,845	310,022	294,352
Rhode Island	29,059	21,669	20,218	19,911
South Carolina	4,914	5,009	4,731	4,584
South Dakota	2,992	3,092	3,800	3,660
Tennessee	11,953	11,447	11,377	10,989
Texas	64,072	61,986	63,284	65,808
Utah	0	20	0	4
Vermont	157	76	77	88
Virginia	35,914	33,356	26,520	25,767
Washington	2,879	3,337	3,806	2,961
West Virginia	97,197	93,358	92,898	84,189
Wisconsin	48,344	43,127	39,217	39,253
Wyoming	3,343	3,386	4,635	3,397
Total	2,408,678	2,317,042	2,326,792	2,197,937

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during January, 1921, are as follows: California, 374,600; Florida, 134,585; Georgia, 457,444; Idaho, 125,000; Louisiana, 126,524; Minnesota, 446,640; Mississippi, 46,855; Oregon, 4,234,316; Washington, 921,875; Wisconsin, 637,875; and all other States (Alabama, Arkansas, Maine, Michigan, Oklahoma, Texas, Virginia), 261,676.

	October	November	December	January
Total by fuels	2,408,678	2,317,042	2,326,792	2,197,937
Total by water power	1,342,642	1,388,465	1,434,308	1,363,594
Total by water power and fuels	3,751,320	3,705,507	3,761,100	3,561,531

Electric power produced during October, November, and December, 1920, and January, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons			
	1920			1921
	October	November	December	January
Alabama	31,093	32,441	12,993	8,839
Arizona	777	693	596	626
Arkansas	11,814	11,799	14,160	11,522
California	0	0	0	0
Colorado	35,264	36,750	38,695	32,452
Connecticut	60,693	60,561	56,875	56,183
Delaware	9,425	11,106	11,390	9,106
District of Columbia	20,548	21,304	22,239	21,703
Florida	2,680	3,017	2,773	2,197
Georgia	10,418	9,818	8,175	8,184
Idaho	0	25	0	0
Illinois	369,952	386,365	408,638	376,062
Indiana	181,981	183,769	184,367	171,957
Iowa	84,439	87,337	92,077	91,664
Kansas	39,553	47,436	45,816	43,395
Kentucky	41,917	43,675	44,756	43,197
Louisiana	13,970	12,257	13,439	13,198
Maine	373	491	398	51
Maryland	37,108	31,091	28,140	24,559
Massachusetts	122,895	119,140	120,872	115,489
Michigan	144,516	130,018	132,342	118,472
Minnesota	50,763	52,546	61,258	58,124
Mississippi	13,093	12,872	12,650	12,443
Missouri	107,868	105,504	125,687	110,718
Montana	3,710	4,033	4,036	3,770
Nebraska	39,566	41,868	43,677	41,720
Nevada	296	237	243	221
New Hampshire	3,781	3,631	3,492	3,557
New Jersey	132,180	123,462	134,285	116,608
New Mexico	3,430	3,565	4,028	4,139
New York	408,565	412,673	420,593	398,373
North Carolina	21,929	20,936	19,326	19,435
North Dakota	15,539	17,432	18,993	16,739
Ohio	330,844	346,022	334,569	275,376
Oklahoma	9,182	9,311	9,166	8,611
Oregon	150	156	155	165
Pennsylvania	481,647	476,145	476,420	446,443
Rhode Island	20,535	16,727	15,776	13,843
South Carolina	10,584	10,449	9,752	9,301
South Dakota	7,835	7,809	8,190	7,823
Tennessee	26,001	25,639	24,103	23,422
Texas	18,223	18,590	20,259	20,286
Utah	0	50	8	11
Vermont	278	439	468	193
Virginia	47,265	43,551	39,120	38,425
Washington	2,841	3,560	4,239	3,583
West Virginia	102,212	99,412	97,326	85,359
Wisconsin	81,942	72,151	68,655	70,523
Wyoming	9,406	9,347	13,158	9,189
Total	3,169,081	3,167,210	3,208,373	2,947,246

State	Fuel oil - barrels			
	1920			1921
	October	November	December	January
Alabama	9,148	10,723	9,934	7,868
Arizona	21,381	18,684	17,841	15,888
Arkansas	8,977	7,805	4,835	9,102
California	521,166	320,553	305,303	277,535
Colorado	180	54	0	0
Connecticut	1,368	1,354	708	976
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	46,910	51,753	59,290	60,116
Georgia	28,626	19,663	26,561	23,881
Idaho	0	0	0	0
Illinois	261	230	254	266
Indiana	370	412	447	423
Iowa	1,177	962	892	1,128
Kansas	67,870	68,873	66,835	61,838
Kentucky	220	240	250	265
Louisiana	37,592	41,438	45,962	39,087
Maine	3,203	2,915	2,797	1,381
Maryland	18	17	0	5
Massachusetts	19,921	23,274	21,796	24,560
Michigan	233	276	215	226
Minnesota	382	396	330	470
Mississippi	8,014	8,316	8,142	7,979
Missouri	23,952	29,200	18,050	10,479
Montana	195	213	170	1,504
Nebraska	3,277	2,839	2,878	2,702
Nevada	0	0	0	17
New Hampshire	5	12	10	0
New Jersey	101	97	123	95
New Mexico	750	649	657	634
New York	8,786	7,186	6,756	9,493
North Carolina	125	150	200	100
North Dakota	155	151	196	156
Ohio	555	555	540	510
Oklahoma	16,581	26,315	33,614	23,102
Oregon	1,375	1,622	3,635	6,189
Pennsylvania	0	135	178	161
Rhode Island	45,089	37,973	40,450	45,322
South Carolina	0	35	35	35
South Dakota	1,997	1,984	2,215	2,445
Tennessee	0	0	0	0
Texas	269,295	254,253	249,150	248,726
Utah	0	0	0	0
Vermont	1,104	32	30	0
Virginia	130	933	210	0
Washington	12,244	10,999	12,210	8,298
West Virginia	50	50	50	0
Wisconsin	235	291	301	247
Wyoming	6,477	7,346	5,896	4,148
Total	1,169,495	960,958	949,946	897,357

State	Natural gas - thousands of cubic feet			
	1920			1921
	October	November	December	January
Alabama	0	0	0	0
Arizona	0	0	0	0
Arkansas	206,904	187,858	217,238	176,572
California	274,218	164,247	171,449	155,926
Colorado	0	0	0	0
Connecticut	0	0	0	0
Delaware	0	0	0	0
District of Columbia	0	0	0	0
Florida	0	0	0	0
Georgia	0	0	0	0
Idaho	0	0	0	0
Illinois	0	0	0	0
Indiana	2,000	2,000	2,000	2,000
Iowa	0	0	0	0
Kansas	164,913	56,303	57,922	65,869
Kentucky	13,610	18,229	12,801	7,968
Louisiana	104,848	104,648	102,972	95,297
Maine	0	0	0	0
Maryland	590	590	590	590
Massachusetts	0	0	0	0
Michigan	0	0	0	0
Minnesota	0	0	0	0
Mississippi	0	0	0	0
Missouri	0	0	0	0
Montana	1,169	1,431	1,400	0
Nebraska	0	0	0	0
Nevada	0	0	0	0
New Hampshire	0	0	0	0
New Jersey	0	0	0	0
New Mexico	0	0	0	0
New York	7,593	14,872	6,730	3,753
North Carolina	0	0	0	0
North Dakota	0	0	0	0
Ohio	579,909a/	415,942b/	360,607c/	305,013d/
Oklahoma	550,551	437,951	409,766	423,411
Oregon	0	0	0	0
Pennsylvania	49,786	50,617	49,135	47,953
Rhode Island	0	0	0	0
South Carolina	0	0	0	0
South Dakota	0	0	0	0
Tennessee	0	0	0	0
Texas	122,116	135,651	143,344	128,678
Utah	0	0	0	0
Vermont	0	0	0	0
Virginia	0	0	0	0
Washington	0	0	0	0
West Virginia	322,308	314,909	317,256	279,328
Wisconsin	0	0	0	0
Wyoming	4,160	4,065	19,920	28,831
Total	2,404,675	1,909,313	1,873,130	1,721,191

a/ Includes 119,218 M cubic feet of artificial gas.
b/ " 125,112 " " " " " " "
c/ " 97,486 " " " " " " "
d/ " 62,751 " " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 94 per cent of the capacity of all plants listed.

The production of electricity by public utility plants in January indicates that the decline in the demand for electricity shown in December has continued during January. The mean daily output for the month was 114,880,000 kilowatt-hours. This is about 8 per cent less than that for January, 1920, and is less than that for any month during 1920.

Thirty-eight per cent of the total kilowatt-hours generated during the month was produced by water power. This is an increase of 5 in per cent as compared with January, 1920, and is probably due to better water supply at water power plants owing to the mild winter.

The marked decrease in the daily output beginning with December is shown on the diagram on page 7.

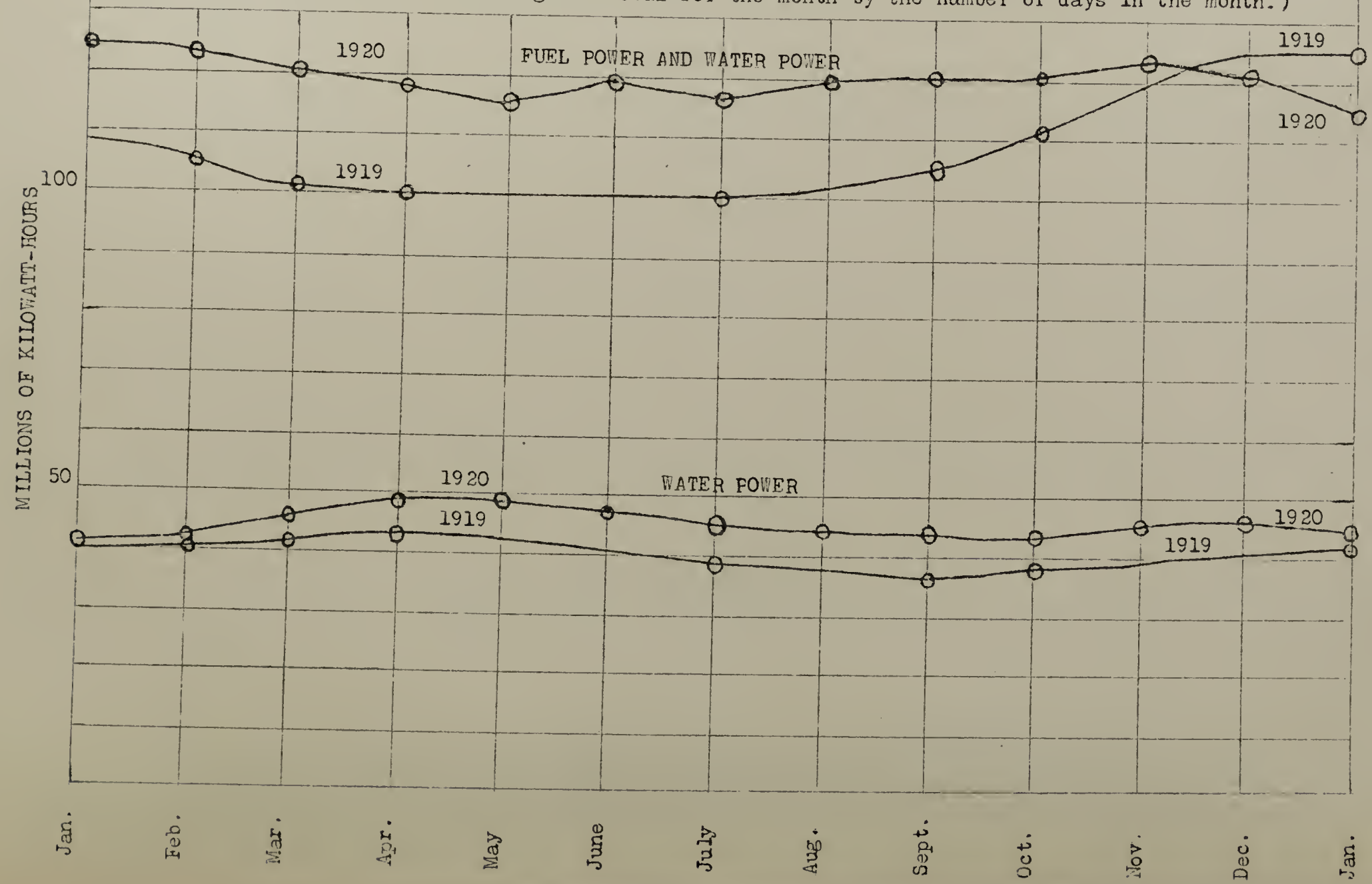
Revised figures of the output of electricity by public utility plants for each month in 1920 will be published shortly.

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power and Fuel Power
1919 and 1920

(The average is obtained by dividing the total for the month by the number of days in the month.)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY
Washington

Office of the Director

April 16, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR FEBRUARY, MARCH, APRIL, JULY, SEPTEMBER, AND OCTOBER, 1919.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1919					
	February	March	April	July	September	October
Ala.	39,341	30,275	28,488	28,442	19,193	15,899
Ariz.	3,967	6,689	7,577	7,478	8,602	8,608
Ark.	79	72	69	88	79	88
Calif.	187,486	215,914	228,775	200,528	161,676	157,004
Colo.	13,141	14,254	15,019	14,961	13,437	14,861
Conn.	7,043	14,884	15,804	5,943	6,682	5,825
Del.	0	0	0	0	0	0
D. C.	0	0	0	0	0	0
Fla.	678	892	777	942	865	961
Ga.	35,909	37,264	31,404	34,224	28,945	32,626
Idaho	41,430	39,913	36,019	50,209	46,908	40,127
Ill.	15,611	15,282	16,134	15,323	14,825	16,622
Ind.	3,682	3,654	3,511	2,736	2,716	3,442
Iowa	44,182	48,696	43,737	51,802	48,992	57,825
Kans.	1,267	1,223	913	981	683	807
Ky.	4	4	4	4	0	0
La.	0	0	0	0	0	0
Me.	18,831	19,907	18,485	17,627	18,252	19,885
Md.	284	371	358	329	169	65
Mass.	18,898	31,365	32,322	15,163	29,068	33,231
Mich.	52,236	59,649	65,211	50,043	47,460	55,904
Minn.	18,303	32,740	43,204	36,818	33,181	36,580
Miss.	0	0	0	0	0	0
Mo.	4,297	5,920	4,418	2,237	2,869	3,189
Mont.	68,408	77,869	77,853	83,220	61,295	68,078
Nebr.	748	959	1,118	1,295	1,250	1,466
Nev.	3,198	2,812	2,470	2,559	2,311	2,896
N. H.	4,946	5,763	5,683	4,499	4,478	5,118
N. J.	162	197	187	151	137	146
N. Mex.	57	56	80	144	73	110
N. Y.	195,219	223,078	220,677	212,033	221,411	237,767
N. C.	42,645	46,318	45,755	45,317	45,615	50,475
N. Dak.	0	0	0	0	0	0
Ohio	3,053	3,932	3,565	2,378	2,119	2,597
Okla.	167	183	149	161	190	208
Oreg.	27,876	29,113	27,248	29,130	30,024	26,285
Pa.	55,098	62,509	58,466	52,648	33,818	42,775
R. I.	562	1,042	726	240	491	343
S. C.	43,899	43,394	43,287	42,649	38,150	41,958
S. Dak.	698	1,183	1,320	1,131	758	828
Tenn.	43,640	45,222	37,999	32,316	23,488	27,203
Texas	266	284	305	191	61	71
Utah	13,135	15,463	17,434	12,405	11,800	17,344
Vt.	13,428	18,574	19,482	11,748	12,641	14,585
Va.	17,883	20,122	19,298	17,666	7,266	15,637
Wash.	70,779	79,346	74,575	79,881	77,413	84,623
W. Va.	1,378	1,593	1,642	1,399	586	1,081
Wis.	32,534	47,534	48,880	41,512	35,530	44,401
Wyo.	248	172	138	179	139	179
Total	1,146,649	1,305,683	1,305,566	1,210,730	1,095,646	1,189,726

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1919					
	February	March	April	July	September	October
Ala.	11,059	4,907	4,477	3,689	13,268	15,102
Ariz.	13,464	13,329	8,854	10,014	9,509	13,095
Ark.	6,252	6,625	6,030	7,692	7,288	8,049
Calif.	38,268	33,939	33,645	116,804	128,885	119,486
Colo.	17,279	17,144	14,365	12,549	15,527	17,466
Conn.	42,589	37,469	35,525	48,182	48,184	54,827
Del.	5,551	4,784	4,655	5,225	5,438	6,069
D. C.	18,094	19,331	18,457	19,221	18,593	20,543
Fla.	8,582	8,789	7,776	7,731	8,093	9,040
Ga.	6,054	6,082	6,200	6,595	12,007	13,959
Idaho	168	257	155	1,219	1,130	11,270
Ill.	198,899	207,673	194,109	183,518	194,520	222,331
Ind.	52,342	54,617	51,980	54,354	54,857	62,594
Iowa	23,993	24,964	23,646	24,531	26,568	30,626
Kans.	29,619	30,458	30,870	35,085	37,572	41,751
Ky.	18,794	19,127	18,555	19,205	16,343	18,205
La.	14,130	14,876	14,582	15,518	15,748	17,353
Me.	73	73	93	220	662	547
Md.	18,435	13,898	11,442	16,378	31,761	29,222
Mass.	101,799	100,030	90,601	110,479	100,121	106,363
Mich.	97,285	96,125	88,363	108,402	119,802	134,819
Minn.	26,826	15,220	7,261	11,477	28,298	28,155
Miss.	5,115	5,393	4,927	5,206	5,019	5,573
Mo.	37,207	40,551	36,245	39,132	42,997	44,800
Mont.	883	888	821	848	731	770
Nebr.	15,493	16,413	16,004	16,621	17,690	19,284
Nev.	137	121	727	720	426	481
N. H.	2,309	2,114	1,898	3,814	3,501	3,666
N. J.	75,665	76,412	76,642	79,546	88,463	88,207
N. Mex.	1,416	1,556	1,455	1,603	1,290	1,531
N. Y.	285,271	288,537	270,644	276,791	280,430	313,279
N. C.	7,149	7,426	7,082	7,243	8,954	9,823
N. Dak.	2,312	2,400	2,103	2,449	2,256	2,568
Ohio	189,041	194,937	183,702	206,153	203,415	220,400
Okla.	13,080	13,796	12,989	13,826	13,262	14,898
Oreg.	4,754	3,759	3,539	4,323	11,985	14,168
Pa.	238,970	246,930	233,597	238,021	251,819	273,804
R. I.	28,767	18,405	16,839	19,821	25,617	24,177
S. C.	3,876	4,010	3,676	3,480	4,102	4,947
S. Dak.	2,327	2,590	1,731	2,133	2,409	2,847
Tenn.	9,774	10,680	10,405	9,164	13,299	15,326
Texas	43,070	47,616	44,816	45,537	47,582	53,499
Utah	0	0	0	0	2	2
Vt.	173	179	187	976	269	165
Va.	17,254	18,709	16,539	19,336	27,503	29,024
Wash.	4,171	4,521	4,164	5,434	9,619	11,108
W. Va.	52,620	58,108	59,396	66,523	72,346	82,507
Wis.	32,916	33,075	24,682	27,637	37,647	38,280
Wyo.	3,315	3,603	3,249	3,386	3,577	3,957
Total	1,829,616	1,832,446	1,709,700	1,917,834	2,070,384	2,229,660
Total by water power	1,146,649	1,305,683	1,305,566	1,210,730	1,095,646	1,189,726
Total by water power and fuels	2,976,265	3,138,129	3,015,266	3,128,564	3,166,030	3,419,386

Electric power produced during February, March, April, July, September, and October, 1919, required the combustion of fuels in the quantities indicated in the following tables:

COAL (short tons)

State	1919					
	February	March	April	July	September	October
Ala.	27,026	16,467	14,836	15,458	22,579	25,973
Ariz.	541	579	410	1,238	1,378	1,383
Ark.	13,386	11,177	9,902	8,364	7,930	8,135
Calif.	0	0	0	0	0	0
Colo.	41,507	44,079	36,135	29,204	33,370	34,984
Conn.	63,942	62,234	58,094	67,513	66,308	75,088
Del.	8,610	7,713	7,000	6,604	6,889	8,157
D. C.	21,418	21,440	20,983	21,412	20,018	22,050
Fla.	3,424	5,594	3,056	3,193	2,029	2,327
Ga.	16,529	11,934	12,009	13,560	23,702	27,063
Idaho	120	111	121	88	187	156
Ill.	335,309	350,824	318,378	304,160	319,534	353,493
Ind.	141,060	157,931	143,829	142,587	149,881	169,368
Iowa	85,745	79,694	72,211	69,703	72,557	81,451
Kans.	47,588	51,022	48,636	50,668	36,828	45,866
Ky.	38,252	39,386	37,380	39,390	33,024	36,026
La.	14,305	13,885	13,878	11,324	19,377	12,714
Me.	383	348	357	534	1,485	1,167
Md.	28,452	23,657	20,755	25,951	38,883	35,144
Mass.	129,171	143,525	129,877	130,428	119,993	128,178
Mich.	129,417	124,941	113,623	129,612	150,923	162,231
Minn.	57,282	39,810	25,038	26,523	47,346	55,974
Miss.	16,381	16,542	16,008	16,512	15,928	17,982
Mo.	86,645	89,531	82,143	82,045	77,874	82,850
Mont.	5,537	5,591	5,455	4,894	4,334	4,930
Nebr.	29,946	30,956	29,813	31,906	32,602	35,060
Nev.	198	180	140	195	157	198
N. H.	5,395	3,911	3,241	5,808	4,275	4,215
N. J.	112,366	115,711	114,137	116,944	112,138	127,226
N. Mex.	4,045	4,438	3,627	4,133	4,028	4,141
N. Y.	368,569	363,338	325,474	336,702	344,880	377,137
N. C.	15,648	16,234	15,612	14,915	17,172	19,312
N. Dak.	16,638	17,153	14,473	14,808	13,738	15,198
Ohio	314,873	321,643	289,610	279,834	286,869	310,676
Okla.	11,136	12,578	10,075	8,717	6,172	9,513
Oreg.	223	433	223	222	954	1,034
Pa.	401,874	412,561	396,096	388,957	399,401	429,139
R. I.	29,692	22,024	20,819	22,648	28,494	27,371
S. C.	9,844	9,540	8,811	8,761	8,570	10,884
S. Dak.	5,725	7,005	3,945	5,017	5,972	7,139
Tenn.	23,726	28,724	24,710	22,156	28,890	30,105
Texas	25,330	33,963	26,618	29,269	24,511	26,696
Utah	65	61	31	0	0	5
Vt.	542	412	246	3,909	531	367
Va.	29,127	31,444	28,453	30,674	35,993	40,041
Wash.	3,611	3,473	2,411	2,060	3,268	7,270
W. Va.	62,459	70,717	69,426	69,526	72,809	95,614
Wis.	69,225	74,987	53,037	46,221	61,638	66,703
Wyo.	12,450	13,384	12,242	12,752	10,991	13,131
Total	2,866,133	2,912,435	2,643,384	2,657,099	2,766,510	3,050,864

FUEL OIL (barrels)

State	1919					
	February	March	April	July	September	October
Ala.	8	8	8	8	4,925	5,475
Ariz.	62,055	50,520	38,169	40,999	33,910	47,604
Ark.	447	489	456	450	289	321
Calif.	199,388	185,127	161,651	550,799	561,819	572,024
Colo.	100	95	98	174	90	100
Conn.	333	323	279	213	1,329	1,550
Del.	0	17	0	0	0	0
D. C.	0	0	0	0	0	0
Fla.	32,714	32,025	28,785	30,775	37,485	47,590
Ga.	120	120	167	2,386	4,105	5,546
Idaho	10	10	10	9	10	10
Ill.	3,918	2,198	2,142	984	460	484
Ind.	448	167	420	402	314	275
Iowa	787	730	743	720	589	600
Kans.	47,747	60,803	58,432	60,742	71,410	71,379
Ky.	358	351	353	341	165	190
La.	30,811	30,094	28,192	30,508	32,851	33,487
Me.	7	7	17	0	20	26
Md.	19	18	30	30	0	0
Mass.	24	14	17	21	0	14
Mich.	191	104	139	204	63	70
Minn.	1,138	1,016	854	832	347	387
Miss.	370	320	311	443	117	134
Mo.	33,571	21,053	19,519	18,847	56,919	66,736
Mont.	530	492	488	502	294	334
Nebr.	3,512	3,509	3,433	3,364	3,027	3,233
Nev.	900	1,044	997	1,780	1,188	1,324
N. H.	20	20	3	3	35	31
N. J.	92	103	80	79	76	379
N. Mex.	1,060	1,360	1,373	11,610	743	1,431
N. Y.	544	546	501	1,224	879	276
N. C.	20	20	20	20	0	0
N. Dak.	539	514	530	553	226	151
Ohio	739	842	764	619	585	622
Okla.	8,109	6,300	9,921	20,067	31,628	53,065
Oreg.	24,384	19,459	15,456	5,664	5,153	12,278
Pa.	22	14	16	297	210	293
R. I.	0	0	0	0	0	0
S. C.	78	82	93	102	0	0
S. Dak.	3,164	3,379	3,091	3,231	2,336	2,662
Tenn.	86	84	81	82	20	25
Texas	170,905	181,397	178,033	188,691	214,285	240,135
Utah	0	0	0	0	0	0
Vt.	2	2	2	2	0	0
Va.	122	153	52	122	126	128
Wash.	17,810	18,804	17,879	22,071	38,550	34,695
W. Va.	52	58	52	45	45	50
Wis.	644	662	565	574	651	718
Wyo.	8,470	9,062	8,840	4,008	4,300	4,388
Total	656,368	633,515	583,081	994,667	1,111,577	1,210,220

NATURAL GAS (thousands of cubic feet)

State	1919					
	February	March	April	July	September	October
Ala.	0	0	0	0	0	0
Ariz.	0	0	0	0	0	0
Ark.	63,430	85,398	97,726	182,848	201,387	220,739
Calif.	21,611	181,785	273,642	242,228	235,872	190,495
Colo.	0	0	0	0	0	0
Conn.	20,766a/	12,615a/	11,309a/	0	0	0
Del.	0	0	0	0	0	0
D. C.	0	0	0	0	0	0
Fla.	98	151	3,780	0	0	0
Ga.	0	0	0	0	0	0
Idaho	0	0	0	0	0	0
Ill.	0	0	0	0	0	0
Ind.	2,159	2,108	1,909	1,878	1,818	2,020
Iowa	0	0	0	0	0	0
Kans.	83,405	86,901	65,374	84,323	102,580	212,375
Ky.	0	0	0	0	0	0
La.	55,092	47,458	49,599	63,624	73,924	83,030
Me.	0	0	0	0	0	0
Md.	1,500	1,500	1,500	1,350	1,350	1,500
Mass.	0	0	0	0	0	0
Mich.	0	0	0	0	0	0
Minn.	0	0	0	0	0	0
Miss.	0	0	0	0	0	0
Mo.	0	0	0	0	0	0
Mont.	1,008	960	907	912	1,033	1,207
Nebr.	0	0	0	0	0	0
Nev.	0	0	0	0	0	0
N. H.	0	0	0	0	0	0
N. J.	0	0	0	0	0	0
N. Mex.	0	0	0	0	0	0
N. Y.	149,831	164,408	147,432	56,949	58,089	58,747
N. C.	0	0	0	0	0	0
N. Dak.	0	0	0	0	0	0
Ohio	250,488	323,320	333,684	511,861b/	530,186	509,506
Okla.	423,813	477,050	458,496	474,930	387,388	414,020
Oreg.	0	0	0	0	0	0
Pa.	42,301	54,450	53,533	40,531	40,224	42,417
R. I.	0	0	0	0	0	0
S. C.	0	0	0	0	0	0
S. Dak.	0	0	0	0	0	0
Tenn.	0	0	0	0	0	0
Texas	173,695	179,760	177,778	114,148	58,717	55,798
Utah	0	0	0	0	0	0
Vt.	0	0	0	0	0	0
Va.	0	0	0	0	0	0
Wash.	0	0	0	0	0	0
W. Va.	118,029	142,688	180,069	278,084	205,128	200,833
Wis.	0	0	0	0	0	0
Wyo.	5,278	6,208	3,139	3,481	2,850	3,300
Total	1,412,504	1,766,850	1,859,867	2,057,147	1,900,646	1,995,987

a/ Artificial gas.
b/ Includes 182,415 M cu. ft. of artificial gas.

The quantities in these tables are based on returns received from about 3,000 power plants engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of the electric generators of these 3,000 plants represents about 90 per cent of the total capacity of all public utility plants in the United States in 1919 engaged in the production of electricity for public use.

Based on reports for February, March, April, July, September, and October, 1919, and January, 1920, and interpolated figures for January, May, June, August, November, and December, 1919, the mean daily production of electricity by public utility plants in the United States for each month in 1919 is shown in the following table. The information in the table is shown graphically on page 7.

Average Daily Production of Electricity by Public Utility Power Plants in the United States in 1919.
(Based on monthly totals)

Month	Water power and fuel power (Kw-hrs)	Water power Kw.-hrs.	Water power Percentage	Fuel power Kw.-hrs.	Fuel power Percentage
January	109,500,000	40,100,000	36.6	69,400,000	63.4
February	106,2[illegible]5,000	40,[illegible]50,000	38.5	65,345,000	61.5
March	101,22[illegible],000	42,118,000	41.6	5[illegible],111,000	55.[illegible]
April	100,508,000	43,513,000	43.3	56,990,000	56.7
May	100,500,000	42,000,000	41.8	5[illegible],500,000	58.2
June	100,500,000	40,500,000	40.3	60,000,000	59.7
July	100,921,000	39,055,000	38.7	61,856,000	61.3
August	102,000,000	37,800,000	37.1	64,200,000	62.9
September	105,534,000	36,521,000	34.6	69,013,000	65.4
October	110,302,000	38,378,000	34.[illegible]	71,924,000	65.2
November	119,000,000	39,200,000	32.[illegible]	79,800,000	67.1
December	124,200,000	40,000,000	32.2	84,200,000	67.[illegible]

Total Production of Electricity and Consumption of Fuels by Public Utility Power Plants in the United States during 1919.

Production of Electricity

Water power and fuel power (Kw-hrs.)	Water power Kw.-hrs.	Water power Percentage	Fuel power Kw.-hrs.	Fuel power Percentage
38,920,840,000	14,605,900,000	37.5	24,314,940,000	62.5

Consumption of Fuels

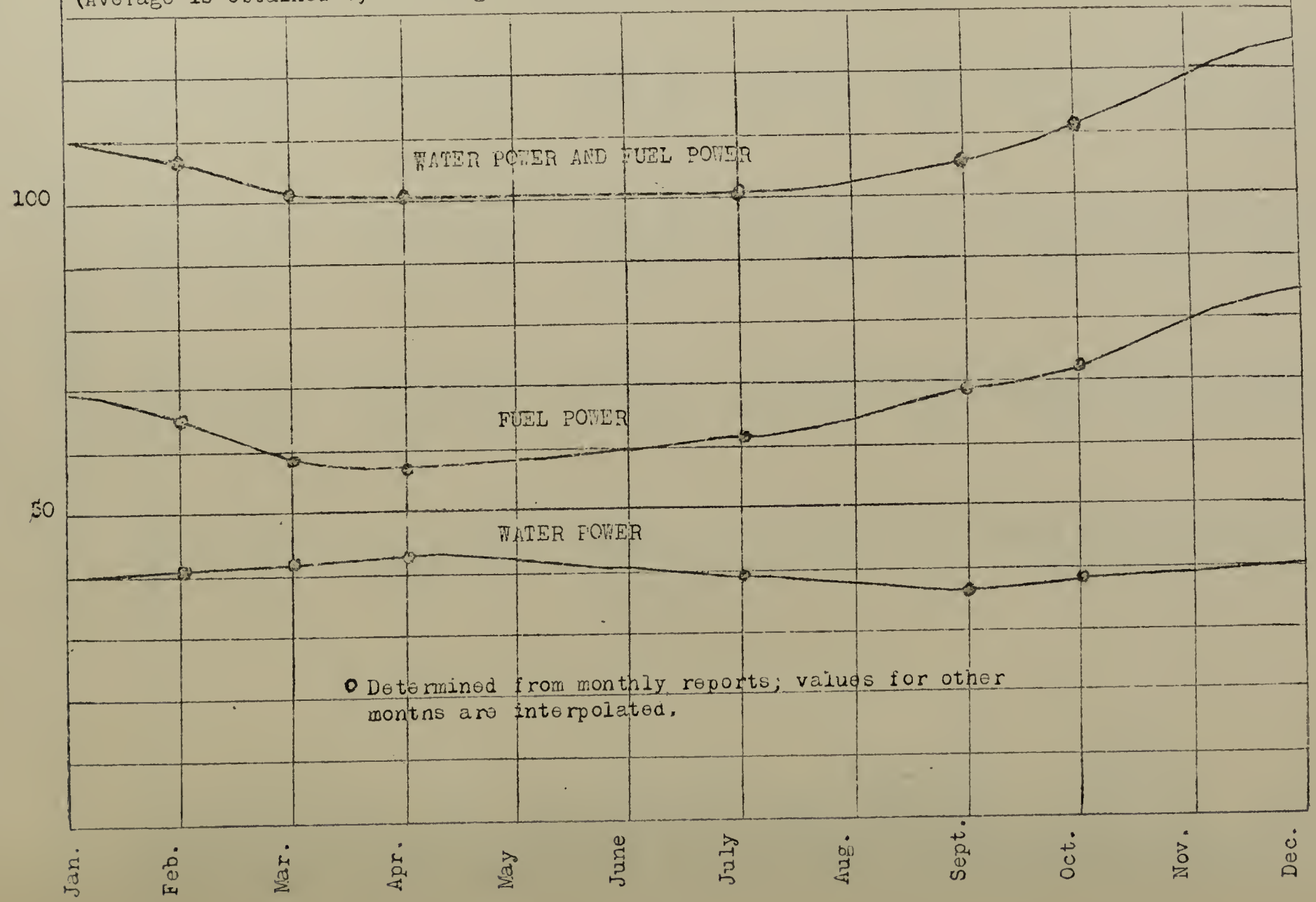
Coal Short tons	Fuel Oil Barrels	Gas M cubic feet
35,100,000	11,050,000	21,406,000

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power and Fuel Power
1919

(Average is obtained by dividing the total for the month by the number of days in the month.)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

May 1, 1921.

Office of the Director

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR OCTOBER, NOVEMBER, AND DECEMBER, 1920, AND JANUARY AND FEBRUARY, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1920			1921	
	October	November	December	January	February
Alabama	17,290	19,735	33,937	35,930	32,900
Arizona	8,629	7,417	6,603	6,722	6,731
Arkansas	113	107	115	104	96
California	196,851	229,342	256,652	253,418	229,855
Colorado	19,192	16,512	14,870	15,104	13,820
Connecticut	14,044	15,719	19,493	16,176	13,080
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	1,313	1,292	959	1,138	883
Georgia	42,416	40,348	38,957	38,960	38,126
Idaho	43,384	42,061	45,872	46,512	40,298
Illinois	16,139	16,248	16,380	11,170	14,626
Indiana	1,731	2,259	3,623	4,154	3,612
Iowa	54,071	57,372	50,648	50,395	46,015
Kansas	1,933	1,507	1,191	1,712	1,502
Kentucky	0	0	0	0	0
Louisiana	0	0	0	0	0
Maine	29,189	30,544	30,564	33,040	29,235
Maryland	132	194	450	275	234
Massachusetts	25,485	35,093	39,297	35,734	29,184
Michigan	55,256	55,958	61,055	61,054	49,080
Minnesota	36,508	33,616	31,274	29,118	24,074
Mississippi	0	0	0	0	0
Missouri	3,155	1,779	4,162	3,291	5,170
Montana	92,867	84,928	79,353	70,484	54,330
Nebraska	1,314	1,263	830	1,157	1,025
Nevada	2,402	2,535	2,500	2,570	2,377
New Hampshire	4,979	5,420	6,233	14,573	10,931
New Jersey	151	165	254	243	209
New Mexico	73	78	76	70	54
New York	248,565	256,097	249,264	216,307	186,937
North Carolina	61,843	60,145	49,800	47,010	42,357
North Dakota	0	0	0	0	0
Ohio	1,251	2,325	3,030	3,029	3,039
Oklahoma	201	193	278	278	255
Oregon	34,089	30,927	34,470	35,095	32,644
Pennsylvania	48,340	54,870	60,341	51,005	52,423
Rhode Island	161	381	703	713	342
South Carolina	58,815	57,593	52,483	54,068	47,475
South Dakota	1,320	1,256	1,000	737	638
Tennessee	36,351	34,601	33,698	33,782	30,323
Texas	491	492	431	383	349
Utah	21,243	22,547	21,133	18,125	18,058
Vermont	17,296	20,482	19,586	10,108	9,818
Virginia	11,613	12,528	22,783	21,689	22,353
Washington	100,442	96,037	100,703	101,231	87,300
West Virginia	1,337	1,565	2,424	2,456	2,377
Wisconsin	30,458	34,716	36,608	34,866	31,284
Wyoming	209	218	225	161	120
Total	1,342,642	1,388,465	1,434,308	1,361,141	1,215,739

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1920			1921	
	October	November	December	January	February
Alabama	22,262	22,809	7,853	5,006	4,838
Arizona	5,009	4,539	4,274	3,659	3,231
Arkansas	10,059	10,430	10,540	10,511	9,519
California	111,699	64,954	56,726	51,012	41,290
Colorado	16,187	18,348	19,217	17,511	14,263
Connecticut	41,360	40,311	37,881	38,826	37,011
Delaware	6,556	6,634	7,045	6,472	5,686
District of Columbia	21,552	22,066	23,781	23,385	21,111
Florida	9,689	10,547	11,631	11,693	11,221
Georgia	9,430	8,918	8,099	7,087	6,337
Idaho	125	130	118	140	190
Illinois	242,130	248,774	265,363	247,986	221,776
Indiana	81,317	80,039	79,400	74,236	68,747
Iowa	32,004	31,443	33,154	32,554	29,029
Kansas	37,237	39,455	37,128	34,188	27,905
Kentucky	24,394	25,241	26,176	25,137	21,836
Louisiana	19,556	19,252	20,839	19,776	17,675
Maine	574	491	360	87	95
Maryland	30,395	23,026	18,780	18,203	12,710
Massachusetts	109,510	107,507	107,178	106,038	101,379
Michigan	111,990	108,414	102,457	90,466	87,497
Minnesota	33,225	32,481	38,569	36,286	32,109
Mississippi	5,589	5,602	5,607	5,228	5,043
Missouri	58,272	58,673	67,394	58,946	50,658
Montana	686	705	726	685	615
Nebraska	19,894	20,317	25,264	20,811	18,297
Nevada	48	52	47	46	36
New Hampshire	2,858	2,597	2,268	2,358	2,120
New Jersey	92,453	91,705	98,409	87,080	76,306
New Mexico	1,265	1,283	1,371	1,304	1,108
New York	340,196	338,940	353,070	346,920	304,444
North Carolina	11,218	10,748	10,166	9,860	9,158
North Dakota	2,599	2,867	3,028	2,896	2,514
Ohio	245,942	240,309	235,095	219,394	192,656
Oklahoma	19,675	18,830	19,454	18,980	17,690
Oregon	8,243	10,897	7,739	6,436	4,297
Pennsylvania	322,656	307,845	310,022	294,176	281,434
Rhode Island	29,059	21,669	20,218	19,911	21,346
South Carolina	4,914	5,009	4,731	4,584	4,228
South Dakota	2,992	3,092	3,800	3,668	3,222
Tennessee	11,953	11,447	11,377	10,989	10,112
Texas	64,072	61,986	63,284	64,051	56,265
Utah	0	20	0	4	1
Vermont	157	76	77	88	0
Virginia	35,914	33,356	26,520	25,767	19,937
Washington	2,879	3,337	3,806	2,961	2,771
West Virginia	97,197	93,358	92,898	84,166	79,395
Wisconsin	48,344	43,127	39,217	39,253	35,166
Wyoming	3,343	3,386	4,635	3,432	2,923
Total	2,408,678	2,317,042	2,326,792	2,194,253	1,977,197
Total by water power	1,342,642	1,388,465	1,434,308	1,364,141	1,215,739
Total by water power and fuels	3,751,320	3,705,507	3,761,100	3,558,394	3,192,936

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during February, 1921, are as follows: California, 431,800; Florida, 120,974; Georgia, 356,649; Idaho, 190,000; Louisiana, 127,024; Minnesota, 384,068; Mississippi, 439,500; Oregon, 2,704,939; Washington, 1,022,729; Wisconsin, 514,159; and all other States (Alabama, Arkansas, Maine, Michigan, Oklahoma, Texas, Virginia), 236,358.

Electric power produced during October, November, and December, 1920, and January and February, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1920			1921	
	October	November	December	January	February
Alabama	31,093	32,441	12,993	8,839	8,675
Arizona	777	693	596	626	675
Arkansas	11,814	11,799	14,160	11,522	11,776
California	0	0	0	0	0
Colorado	35,264	36,750	38,695	32,452	27,928
Connecticut	60,693	60,561	56,875	56,183	53,216
Delaware	9,425	11,106	11,390	9,106	8,070
District of Columbia	20,548	21,304	22,239	21,703	18,901
Florida	2,680	3,017	2,773	2,197	2,200
Georgia	10,418	9,818	8,175	8,184	7,171
Idaho	0	25	0	0	0
Illinois	369,952	386,365	408,638	375,076	327,122
Indiana	181,981	183,769	184,367	171,807	152,680
Iowa	84,439	87,337	92,077	90,659	78,335
Kansas	39,553	47,436	45,816	44,147	33,646
Kentucky	41,917	43,675	44,756	43,436	38,960
Louisiana	13,970	12,257	13,439	13,198	12,034
Maine	373	491	398	51	39
Maryland	37,108	31,091	28,140	24,559	18,283
Massachusetts	122,895	119,140	120,872	115,489	111,577
Michigan	144,516	130,018	132,342	118,432	108,287
Minnesota	50,763	52,546	61,258	54,853	50,434
Mississippi	13,093	12,872	12,650	12,037	10,732
Missouri	107,868	105,504	125,687	109,698	94,328
Montana	3,710	4,033	4,036	3,770	3,682
Nebraska	39,566	41,868	43,677	41,710	36,469
Nevada	296	237	243	221	184
New Hampshire	3,781	3,631	3,492	3,557	2,769
New Jersey	132,180	123,462	134,285	117,254	99,983
New Mexico	3,430	3,565	4,028	4,129	3,449
New York	408,565	412,673	420,593	405,664	352,437
North Carolina	21,929	20,936	19,326	19,035	17,454
North Dakota	15,539	17,432	18,993	16,739	14,716
Ohio	330,844	346,022	334,569	303,599	269,059
Oklahoma	9,182	9,311	9,166	12,409	11,522
Oregon	150	156	155	165	126
Pennsylvania	481,647	476,145	476,420	446,380	411,261
Rhode Island	20,535	16,727	15,776	13,843	12,044
South Carolina	10,584	10,449	9,752	9,301	8,845
South Dakota	7,835	7,809	8,190	7,823	7,078
Tennessee	26,001	25,639	24,103	23,422	19,606
Texas	18,223	18,590	20,259	20,436	15,594
Utah	0	50	8	11	5
Vermont	278	439	468	193	0
Virginia	47,265	43,551	39,120	38,425	30,472
Washington	2,841	3,560	4,239	3,583	3,108
West Virginia	102,212	99,412	97,326	85,459	79,204
Wisconsin	81,942	72,151	68,655	70,463	60,900
Wyoming	9,406	9,347	13,158	9,189	7,822
Total	3,169,081	3,167,210	3,208,373	2,981,034	2,642,855

State	Fuel oil - barrels				
	1920			1921	
	October	November	December	January	February
Alabama	9,148	10,723	9,934	7,868	8,013
Arizona	21,381	18,684	17,841	15,888	13,872
Arkansas	8,977	7,805	4,835	9,102	5,825
California	521,166	320,553	305,303	277,733	242,148
Colorado	180	54	0	0	0
Connecticut	1,368	1,354	708	976	1,411
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	46,910	51,753	59,290	60,116	59,522
Georgia	28,626	19,663	26,561	23,881	20,975
Idaho	0	0	0	0	0
Illinois	261	230	254	266	201
Indiana	370	412	447	413	360
Iowa	1,177	962	892	1,128	960
Kansas	67,870	68,873	66,835	57,605	53,255
Kentucky	220	240	250	366	335
Louisiana	37,592	41,438	45,962	39,362	36,935
Maine	3,203	2,915	2,797	1,381	1,182
Maryland	18	17	0	5	5
Massachusetts	19,921	23,274	21,796	24,560	23,510
Michigan	233	276	215	226	185
Minnesota	382	396	330	470	340
Mississippi	8,014	8,316	8,142	7,974	7,895
Missouri	23,952	29,200	18,050	9,329	4,943
Montana	195	213	170	170	168
Nebraska	3,277	2,839	2,878	2,702	3,196
Nevada	0	0	0	17	8
New Hampshire	5	12	10	0	0
New Jersey	101	97	123	95	79
New Mexico	750	649	657	634	580
New York	8,786	7,186	6,756	9,668	7,812
North Carolina	125	150	200	100	95
North Dakota	155	151	196	156	143
Ohio	555	555	540	522	510
Oklahoma	16,581	26,315	33,614	27,636	17,635
Oregon	1,375	1,622	3,635	6,189	6,470
Pennsylvania	0	135	178	161	103
Rhode Island	45,089	37,973	40,450	45,322	48,090
South Carolina	0	35	35	35	35
South Dakota	1,997	1,984	2,215	2,464	1,637
Tennessee	0	0	0	0	0
Texas	269,295	254,253	249,150	248,726	194,767
Utah	0	0	0	0	0
Vermont	1,104	32	30	0	0
Virginia	130	933	210	0	0
Washington	12,244	10,999	12,210	8,298	6,607
West Virginia	50	50	50	0	0
Wisconsin	235	291	301	247	242
Wyoming	6,477	7,346	5,896	4,953	1,755
Total	1,169,495	960,958	949,946	896,744	771,804

State	Natural gas - thousands of cubic feet				
	1920			1921	
	October	November	December	January	February
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	206,904	187,858	217,238	176,572	148,191
California	274,218	164,247	171,449	155,928	84,303
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	164,913	56,303	57,922	65,875	50,176
Kentucky	13,610	18,229	12,801	7,968	6,729
Louisiana	104,848	104,648	102,972	95,093	88,466
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,169	1,431	1,400	1,335	1,048
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	7,593	14,872	6,730	4,798	4,670
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	579,909a/	415,942b/	360,607c/	305,001d/	206,306e/
Oklahoma	550,551	437,951	409,766	408,287	399,520
Oregon	0	0	0	0	0
Pennsylvania	49,786	50,617	49,135	48,010	43,681
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	122,116	135,661	143,344	128,678	132,827
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	322,308	314,909	317,256	278,447	263,988
Wisconsin	0	0	0	0	0
Wyoming	4,160	4,065	19,920	28,831	36,923
Total	2,404,675	1,909,313	1,873,130	1,707,413	1,469,418

a/ Includes 119,218 M cubic feet of artificial gas.
b/ " 125,112 " " " " " "
c/ " 97,488 " " " " " "
d/ " 62,751 " " " " " "
e/ " 52,925 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 94 per cent of the capacity of all plants listed.

The mean daily output in kilowatt-hours for January and February was 114,800,000 and 114,000,000, respectively. Water power produced 38 per cent of the total output for each month.

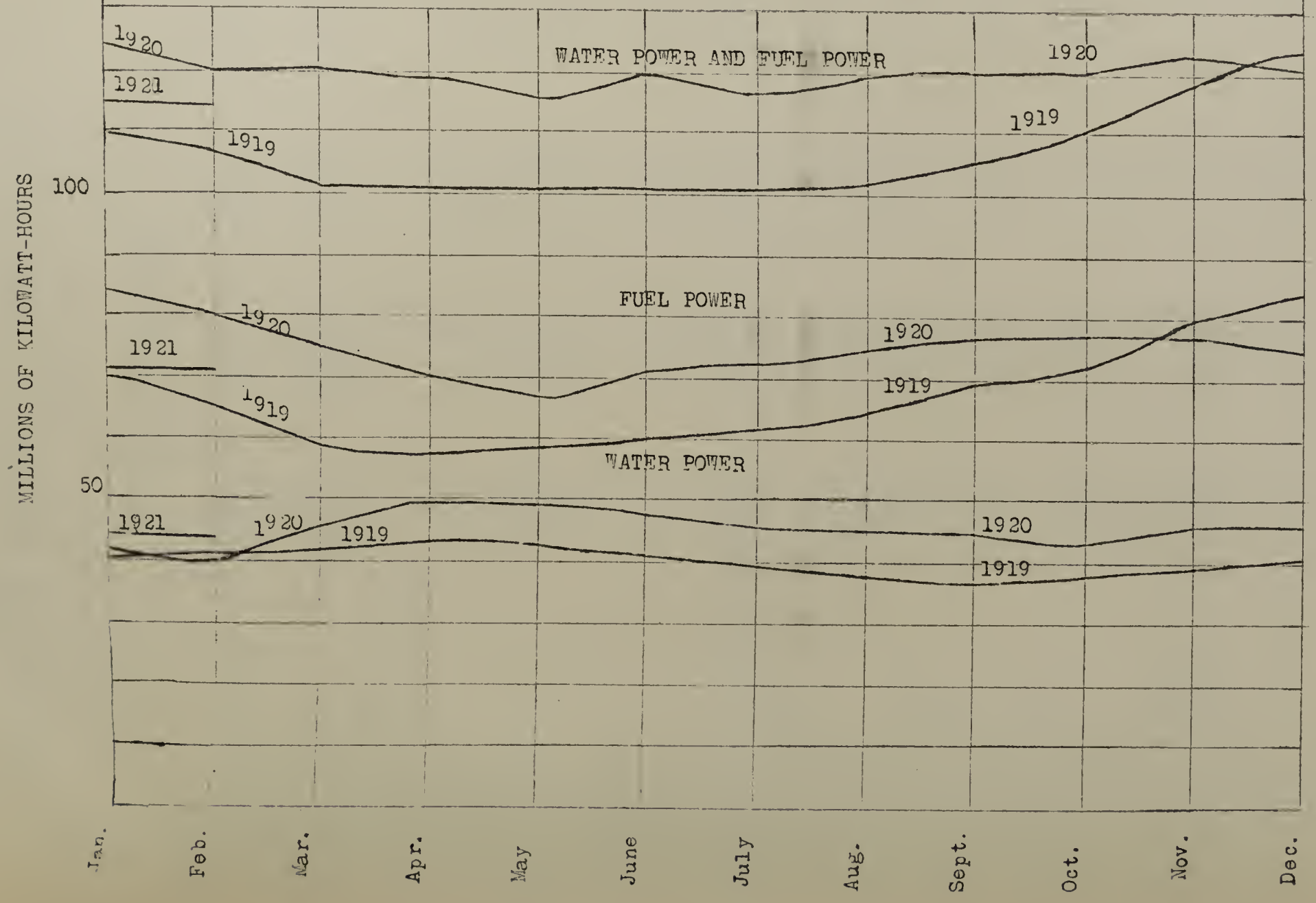
The curves on page 7 show the average daily production of electricity each month by water power, fuel power, and by both water power and fuel power for 1919 and 1920 and January and February, 1921. The curves of mean daily output by water power and fuel power for 1920 and 1921 apparently indicate that the rate of decrease in the average daily production of electricity for the past few months has now materially slackened as the average daily production of electricity in February is but 0.7 per cent less than that for January, while in January it was 5.4 per cent less than that for December. This change may be due to an increase in business during February and a continuation of this resumption of business during March would have a tendency to offset the normal decrease in that month. The figures for March will, therefore, be of special interest as no change or an increase in the average daily production as compared with that for February may be taken as further indication of a gradual resumption of business.

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921.

(Average is obtained by dividing the total for the month by the number of days in the month.)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — June 1, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR NOVEMBER AND DECEMBER, 1920, AND JANUARY, FEBRUARY, AND MARCH, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1920		1921		
	November	December	January	February	March
Alabama	19,735	33,937	35,930	32,900	36,600
Arizona	7,417	6,603	6,722	6,731	9,305
Arkansas	107	115	104	96	96
California	229,342	256,652	253,412	229,855	264,323
Colorado	16,512	14,870	15,104	13,820	16,049
Connecticut	15,719	19,493	16,176	13,080	18,471
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	1,292	959	1,138	883	868
Georgia	40,348	38,957	38,960	38,126	40,097
Idaho	42,061	45,872	46,512	40,298	41,771
Illinois	16,248	16,380	11,170	14,626	16,517
Indiana	2,259	3,623	4,154	3,812	4,552
Iowa	57,372	50,648	50,395	46,015	54,920
Kansas	1,507	1,191	1,712	1,502	1,670
Kentucky	0	0	0	0	0
Louisiana	0	0	0	0	0
Maine	30,544	30,564	33,040	29,235	30,898
Maryland	194	450	275	235	330
Massachusetts	35,093	39,297	35,734	29,184	37,845
Michigan	55,958	61,055	60,712	49,092	64,749
Minnesota	33,616	31,274	29,118	24,074	24,312
Mississippi	0	0	0	0	0
Missouri	1,779	4,162	3,291	5,170	5,270
Montana	84,928	79,353	70,484	54,330	55,847
Nebraska	1,263	830	1,157	1,025	1,443
Nevada	2,535	2,500	2,570	2,377	2,495
New Hampshire	5,420	6,233	14,573	10,931	14,537
New Jersey	165	254	243	209	215
New Mexico	78	76	70	54	53
New York	256,097	249,264	223,167	186,937	194,933
North Carolina a/	18,601	15,317	19,051	18,637	19,873
North Dakota	0	0	0	0	0
Ohio	2,325	3,030	3,029	3,039	3,420
Oklahoma	193	278	278	255	259
Oregon	30,927	34,470	35,095	32,644	36,378
Pennsylvania	54,870	60,341	51,005	52,423	56,182
Rhode Island	381	703	713	342	651
South Carolina	57,593	52,483	54,068	52,075	53,349
South Dakota	1,256	1,000	737	638	1,222
Tennessee	34,601	33,698	33,782	30,323	33,983
Texas	492	431	383	349	302
Utah	22,547	21,133	18,125	18,058	19,819
Vermont	20,482	19,586	10,097	9,802	11,159
Virginia	12,528	22,783	21,689	22,353	21,642
Washington	96,037	100,703	101,231	87,300	93,265
West Virginia	1,565	2,424	2,456	2,377	2,375
Wisconsin	34,716	36,608	34,866	31,284	44,706
Wyoming	218	225	161	120	142
Total	1,346,921	1,399,825	1,342,689	1,196,616	1,336,893

a/ See statement on page 6 in regard to revision of figures for North Carolina.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1920 November	1920 December	1921 January	1921 February	1921 March
Alabama	22,809	7,853	5,006	4,838	3,845
Arizona	4,539	4,274	3,660	3,236	3,463
Arkansas	10,430	10,540	10,510	9,520	9,923
California	64,954	56,726	51,012	41,290	42,545
Colorado	18,348	19,217	17,511	14,263	14,335
Connecticut	40,311	37,881	38,826	37,011	32,333
Delaware	6,634	7,045	6,472	5,686	5,880
District of Columbia	22,066	23,781	23,385	21,111	21,965
Florida	10,547	11,631	11,693	11,221	11,654
Georgia	8,918	8,099	7,087	6,337	6,797
Idaho	130	118	140	190	221
Illinois	248,774	265,363	247,984	221,776	233,629
Indiana	80,039	79,400	74,246	68,728	69,457
Iowa	31,443	33,154	32,419	29,029	29,637
Kansas	39,455	37,128	34,063	27,905	28,386
Kentucky	25,241	26,176	25,137	21,832	23,875
Louisiana	19,252	20,839	19,776	17,675	19,050
Maine	491	360	87	95	205
Maryland	23,026	18,780	18,203	12,709	10,433
Massachusetts	107,507	107,178	116,313	111,654	110,870
Michigan	108,414	102,457	90,875	88,273	92,034
Minnesota	32,481	38,569	36,286	32,109	31,147
Mississippi	5,602	5,607	5,228	5,043	4,962
Missouri	58,673	67,394	59,005	50,690	50,723
Montana	705	726	668	615	608
Nebraska	20,317	25,264	20,812	18,294	19,573
Nevada	52	47	46	36	32
New Hampshire	2,597	2,268	2,358	2,120	1,616
New Jersey	91,705	98,409	87,186	76,464	79,320
New Mexico	1,283	1,371	1,304	1,108	1,186
New York	338,940	353,070	346,920	304,422	323,990
North Carolina	3,896	4,086	3,833	3,388	3,475
North Dakota	2,867	3,028	2,896	2,514	2,482
Ohio	240,309	235,095	219,394	192,557	209,756
Oklahoma	18,830	19,454	18,980	17,273	18,936
Oregon	10,897	7,739	6,436	4,297	4,393
Pennsylvania	307,845	310,022	294,176	281,427	298,905
Rhode Island	21,669	20,218	19,911	21,346	19,635
South Carolina	5,009	4,731	4,584	4,228	4,372
South Dakota	3,092	3,800	3,668	3,222	2,671
Tennessee	11,447	11,377	10,989	10,112	10,752
Texas	61,986	63,284	64,048	56,171	61,221
Utah	20	0	4	1	0
Vermont	76	77	88	0	50
Virginia	33,356	26,520	25,767	19,937	21,452
Washington	3,337	3,806	2,961	2,771	2,577
West Virginia	93,358	92,898	84,166	79,395	86,292
Wisconsin	43,127	39,217	39,253	35,166	35,054
Wyoming	3,386	4,635	3,432	2,923	2,461
Total	2,310,190	2,320,712	2,198,804	1,982,008	2,068,178
Total by water power	1,346,921	1,399,825	1,342,689	1,196,616	1,336,893
Total by water power and fuels	3,657,111	3,720,537	3,541,493	3,178,624	3,405,071

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during March, 1921, are as follows: California, 582,570; Florida, 240,000; Georgia, 360,115; Idaho, 220,828; Louisiana, 89,431; Minnesota, 368,362; Mississippi, 429,480; Oregon, 2,878,862; Washington, 864,990; Wisconsin, 267,581; and all other States (Alabama, Arkansas, Maine, Michigan, Oklahoma, Texas, Virginia), 335,654.

Electric power produced during November and December, 1920, and January, February, and March, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1920		1921		
	November	December	January	February	March
Alabama	38,441	12,993	8,839	8,675	8,080
Arizona	693	596	626	675	575
Arkansas	11,799	14,160	11,604	11,712	11,804
California	0	0	0	0	0
Colorado	36,750	38,695	32,452	27,928	28,654
Connecticut	60,561	56,875	56,183	53,216	50,368
Delaware	11,106	11,390	9,106	8,070	7,895
District of Columbia	21,304	22,239	21,703	18,901	19,572
Florida	3,017	2,773	2,197	2,200	1,926
Georgia	9,818	8,175	8,184	7,171	6,480
Idaho	25	0	0	0	0
Illinois	386,365	408,638	375,066	327,122	334,453
Indiana	183,769	184,367	171,857	152,634	158,290
Iowa	87,337	92,077	89,984	78,335	76,257
Kansas	47,436	45,816	44,374	33,756	39,707
Kentucky	43,675	44,756	43,436	38,935	40,025
Louisiana	12,257	13,439	13,198	12,034	11,917
Maine	491	398	51	39	104
Maryland	31,091	28,140	24,559	18,283	16,156
Massachusetts	119,140	120,872	128,173	124,261	118,183
Michigan	130,018	132,342	119,109	109,963	112,050
Minnesota	52,546	61,258	54,853	50,434	43,710
Mississippi	12,872	12,650	12,121	11,085	10,570
Missouri	105,504	125,687	110,001	94,486	95,943
Montana	4,033	4,036	3,698	3,682	3,799
Nebraska	41,868	43,677	41,710	36,463	35,221
Nevada	237	243	221	184	176
New Hampshire	3,631	3,492	3,557	2,769	2,224
New Jersey	123,462	134,285	117,410	100,255	96,130
New Mexico	3,565	4,028	4,129	3,449	3,664
New York	412,673	420,593	405,664	352,402	360,266
North Carolina	8,946	8,686	8,385	7,254	7,493
North Dakota	17,432	18,993	16,739	14,716	14,716
Ohio	346,022	334,569	303,599	268,859	284,825
Oklahoma	9,311	9,166	12,409	7,992	5,172
Oregon	156	155	165	126	120
Pennsylvania	476,145	476,420	446,380	411,025	409,458
Rhode Island	16,727	15,776	13,843	12,044	11,546
South Carolina	10,449	9,752	9,301	8,845	9,298
South Dakota	7,809	8,190	8,162	7,384	6,690
Tennessee	25,639	24,103	23,422	19,606	21,136
Texas	18,590	20,259	20,361	15,474	20,034
Utah	50	8	11	5	0
Vermont	439	468	193	0	181
Virginia	43,551	39,120	38,425	30,472	32,932
Washington	3,560	4,239	3,583	3,108	3,219
West Virginia	99,412	97,326	85,459	79,204	81,225
Wisconsin	72,151	68,655	70,463	60,900	58,504
Wyoming	9,347	13,158	9,189	7,822	7,902
Total	3,155,220	3,197,733	2,984,154	2,643,955	2,659,468

State	Fuel oil - barrels				
	1920		1921		
	November	December	January	February	March
Alabama	10,723	9,934	7,868	8,013	8,630
Arizona	18,684	17,841	15,872	13,936	15,781
Arkansas	7,805	4,835	9,082	5,825	4,230
California	320,553	305,303	277,733	242,148	238,473
Colorado	54	0	0	0	0
Connecticut	1,354	708	976	1,411	1,094
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	51,753	59,290	60,116	59,522	60,031
Georgia	19,663	26,561	23,881	20,975	24,100
Idaho	0	0	0	0	0
Illinois	230	254	266	201	205
Indiana	412	447	411	360	360
Iowa	962	892	1,128	960	1,054
Kansas	68,873	66,835	57,605	53,255	48,712
Kentucky	240	250	366	335	325
Louisiana	41,438	45,962	39,362	36,935	39,872
Maine	2,915	2,797	1,381	1,182	1,188
Maryland	17	0	5	3	0
Massachusetts	23,274	21,796	24,560	23,510	29,764
Michigan	276	215	226	185	163
Minnesota	396	330	470	340	355
Mississippi	8,316	8,142	7,974	7,895	7,217
Missouri	29,200	18,050	9,329	4,943	7,989
Montana	213	170	209	168	199
Nebraska	2,839	2,878	2,712	3,196	4,232
Nevada	0	0	17	8	0
New Hampshire	12	10	0	0	0
New Jersey	97	123	95	79	96
New Mexico	649	657	634	580	644
New York	7,186	6,756	9,668	7,812	5,043
North Carolina	150	200	100	95	270
North Dakota	151	196	156	143	136
Ohio	555	540	510	510	510
Oklahoma	26,315	33,614	27,636	27,398	39,769
Oregon	1,622	3,635	6,534	6,470	7,332
Pennsylvania	135	178	161	103	135
Rhode Island	37,973	40,450	45,322	48,090	48,294
South Carolina	35	35	35	35	35
South Dakota	1,984	2,215	2,464	1,637	1,736
Tennessee	0	0	0	0	0
Texas	254,253	249,150	248,726	194,763	241,046
Utah	0	0	0	0	0
Vermont	32	30	0	0	0
Virginia	933	210	0	0	0
Washington	10,999	12,210	8,298	6,607	6,192
West Virginia	50	50	0	0	0
Wisconsin	291	301	247	242	235
Wyoming	7,346	5,896	4,953	1,755	1,506
Total	960,958	949,946	897,088	781,625	846,953

State	Natural gas - thousands of cubic feet				
	1920		1921		
	November	December	January	February	March
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	187,858	217,238	176,572	148,191	154,304
California	164,247	171,449	155,928	84,303	101,551
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	56,303	57,922	65,875	50,176	133,024
Kentucky	18,229	12,801	7,968	6,729	15,961
Louisiana	104,648	102,972	95,093	88,466	90,257
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,431	1,400	1,335	1,048	1,084
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	14,872	6,730	4,798	4,670	4,865
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	415,942a/	360,607b/	305,001c/	206,306d/	108,767e/
Oklahoma	437,951	409,766	408,287	399,520	460,918
Oregon	0	0	0	0	0
Pennsylvania	50,617	49,135	48,010	43,681	41,533
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	135,661	143,344	128,679	132,827	121,558
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	314,909	317,256	278,447	263,988	301,428
Wisconsin	0	0	0	0	0
Wyoming	4,066	19,920	28,831	36,923	32,188
Total	1,909,313	1,873,130	1,707,413	1,469,418	1,570,028

a/ Includes 125.112 M cubic feet of artifidal gas.
b/ " 97,488 " " " " " "
c/ " 62,751 " " " " " "
d/ " 52,925 " " " " " "
e/ " 30,151 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 94 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for January, February, and March was 114,200,000, 113,500,000, and 109,800,000, respectively. The proportion produced by water power was as follows: 37.9, 37.7, and 39.3 per cent, respectively.

The curves on page 7 show the average daily production of electricity each month by water power, fuel power, and by both water power and fuel power for 1919, 1920, and for the first three months of 1921. The mean daily rate of production of electricity by public utility plants for March, 1921, is the lowest since September, 1919. The curve of total mean daily output for 1921, however, apparently indicates that there has been no marked decrease in public utility base load since the first of January as the slope of the 1921 curve is fairly comparable with that of the curves for 1919 and 1920 for the same months. From this it would appear that the gradual decrease in the rate of production in 1921 is probably the normal decrease that is to be expected during the period of increasing hours of daylight.

Revised figures of the production of electricity and consumption of fuel by public utility plants in North Carolina for 1920 are as follows:

Month	Production of electricity		
	Water Power	Fuel Power	Total
	Kilowatt-hours	Kilowatt-hours	Kilowatt-hours
January	15,928,000	8,440,000	24,368,000
February	15,604,000	4,228,000	19,832,000
March	17,243,000	4,760,000	22,003,000
April	17,642,000	4,107,000	21,749,000
May	17,789,000	3,478,000	21,267,000
June	17,819,000	3,617,000	21,436,000
July	17,430,000	3,557,000	20,987,000
August	16,792,000	3,474,000	20,266,000
September	18,970,000	3,627,000	22,597,000
October	19,119,000	4,184,000	23,303,000
November	18,601,000	3,896,000	22,497,000
December	15,317,000	4,086,000	19,403,000
Year	208,254,000	51,454,000	259,708,000

Month	Consumption of fuels	
	Coal	Fuel oil
	Short tons	Barrels
January	17,512	34
February	10,114	32
March	11,621	36
April	10,053	36
May	8,541	104
June	8,023	151
July	8,601	121
August	8,425	100
September	8,713	120
October	9,629	125
November	8,946	150
December	8,686	200
Year	118,864	1,209

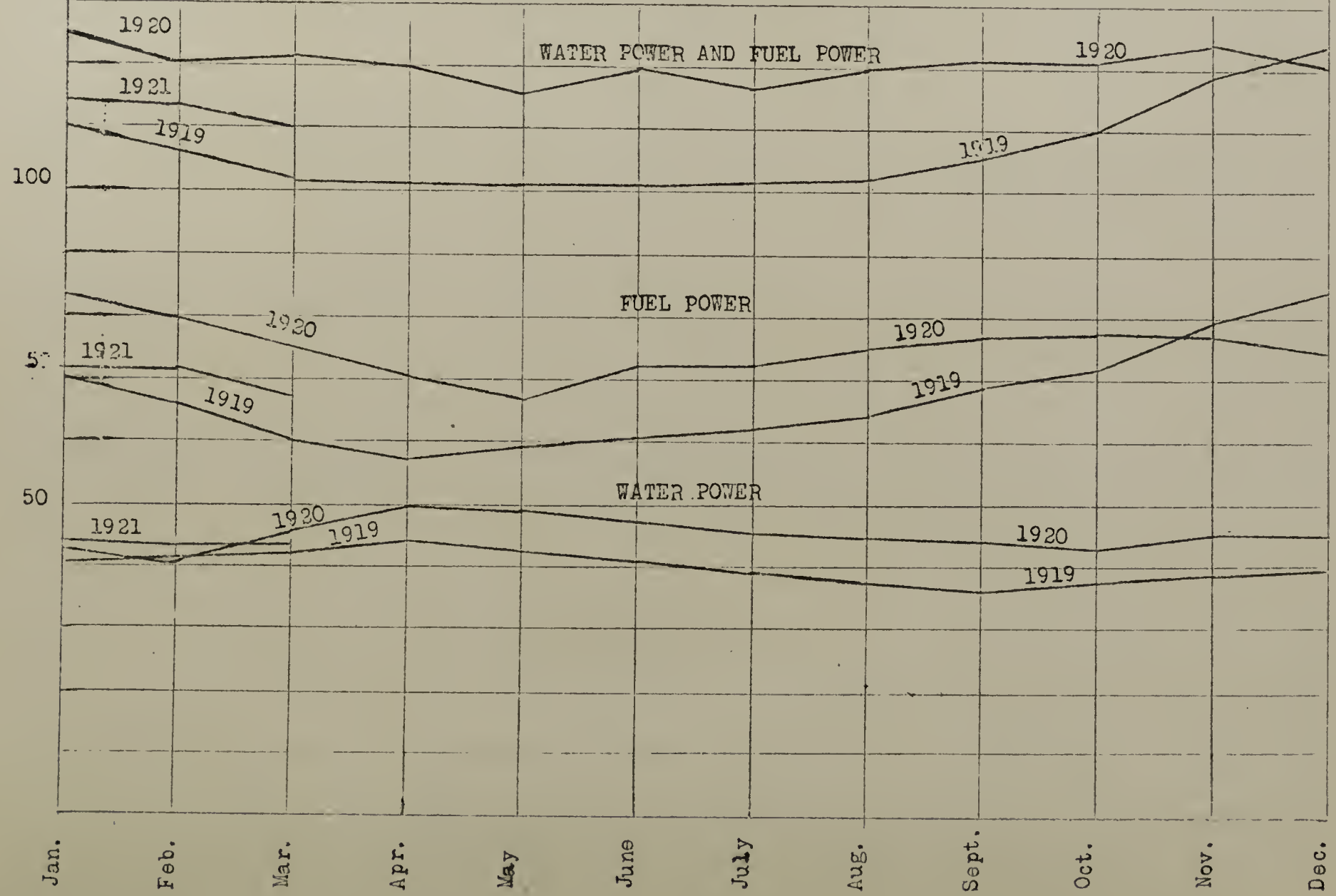
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by the number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — June 29, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR DECEMBER, 1920, AND JANUARY, FEBRUARY, MARCH, AND APRIL, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1920	1921			
	December	January	February	March	April
Alabama	33,937	35,930	32,900	36,600	34,037
Arizona	6,603	6,722	6,731	9,305	6,064
Arkansas	115	104	96	96	94
California	256,652	253,412	229,855	264,323	277,913
Colorado	14,870	15,104	13,820	16,049	14,699
Connecticut	19,493	16,176	13,080	18,471	17,768
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	959	1,138	883	868	768
Georgia	38,957	38,960	38,126	40,037	36,632
Idaho	45,872	46,512	40,298	41,771	35,829
Illinois	16,380	11,170	14,626	16,517	15,383
Indiana	3,623	4,154	3,812	4,552	4,389
Iowa	50,648	50,395	46,015	54,920	53,506
Kansas	1,191	1,712	1,502	1,670	3,010
Kentucky	0	0	0	0	0
Louisiana	0	0	0	0	0
Maine	30,564	33,040	29,235	30,898	23,846
Maryland	450	275	235	330	255
Massachusetts	39,297	35,734	29,184	37,845	38,159
Michigan	61,055	60,712	49,092	64,749	64,059
Minnesota	31,274	29,118	24,074	24,312	37,635
Mississippi	0	0	0	0	0
Missouri	4,162	3,291	5,170	5,270	5,985
Montana	79,353	70,484	54,330	55,847	41,882
Nebraska	830	1,157	1,025	1,443	1,457
Nevada	2,500	2,570	2,377	2,495	2,556
New Hampshire	6,233	14,573	10,931	14,537	19,161
New Jersey	254	243	209	215	215
New Mexico	76	70	54	53	72
New York	249,264	223,167	186,937	194,933	169,810
North Carolina	15,317	19,051	18,637	19,873	17,919
North Dakota	0	0	0	0	0
Ohio	3,030	3,029	3,039	3,420	3,553
Oklahoma	278	278	255	259	176
Oregon	34,470	35,095	32,644	36,378	33,435
Pennsylvania	60,341	51,005	52,423	56,182	53,226
Rhode Island	703	713	342	651	602
South Carolina	52,483	54,068	52,075	53,349	59,608
South Dakota	1,000	737	638	1,222	1,662
Tennessee	33,698	33,782	30,323	33,983	32,421
Texas	431	383	349	302	301
Utah	21,133	18,125	18,058	19,819	12,532
Vermont	19,586	10,097	9,802	11,159	10,069
Virginia	22,783	21,689	22,353	21,642	20,363
Washington	100,703	101,231	87,300	93,265	94,302
West Virginia	2,424	2,456	2,377	2,375	2,252
Wisconsin	36,608	34,866	31,284	44,706	53,795
Wyoming	225	161	120	142	147
Total	1,399,625	1,342,689	1,196,616	1,336,893	1,301,547

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS				
	1920	1921			
	December	January	February	March	April
Alabama	7,853	5,006	4,838	3,845	3,881
Arizona	4,274	3,660	3,236	3,463	3,376
Arkansas	10,540	10,510	9,520	9,923	9,250
California	56,726	51,012	41,290	42,545	54,262
Colorado	19,217	17,511	14,263	14,335	14,304
Connecticut	37,881	38,826	37,011	32,333	31,110
Delaware	7,045	6,472	5,686	5,880	5,440
District of Columbia	23,781	23,385	21,111	21,965	21,532
Florida	11,631	11,693	11,221	11,654	10,867
Georgia	8,099	7,087	6,337	6,797	6,173
Idaho	118	140	190	221	221
Illinois	265,363	247,984	221,776	233,629	212,740
Indiana	79,400	74,246	68,728	69,457	67,001
Iowa	33,154	32,419	29,029	29,637	27,899
Kansas	37,128	34,063	27,905	28,386	25,965
Kentucky	26,176	25,137	21,832	23,875	21,750
Louisiana	20,839	19,776	17,675	19,050	18,362
Maine	360	87	95	205	222
Maryland	18,780	18,203	12,709	10,433	10,709
Massachusetts	107,178	116,313	111,654	110,870	85,710
Michigan	102,457	90,875	88,273	92,034	92,687
Minnesota	38,569	36,286	32,109	31,147	52,710
Mississippi	5,607	5,228	5,043	4,962	4,811
Missouri	67,394	59,005	50,690	50,723	50,963
Montana	726	668	615	608	556
Nebraska	25,264	20,812	18,294	19,573	18,875
Nevada	47	46	36	32	32
New Hampshire	2,268	2,358	2,120	1,616	1,686
New Jersey	98,409	87,186	76,464	79,320	73,644
New Mexico	1,371	1,304	1,108	1,186	1,184
New York	353,070	346,920	304,422	323,990	306,616
North Carolina	4,086	3,833	3,388	3,475	3,168
North Dakota	3,028	2,896	2,514	2,482	2,056
Ohio	235,095	219,394	192,557	209,756	201,748
Oklahoma	19,454	18,980	17,273	18,936	16,083
Oregon	7,739	6,436	4,297	4,393	4,220
Pennsylvania	310,022	294,176	281,427	298,905	281,747
Rhode Island	20,218	19,911	21,346	19,635	17,855
South Carolina	4,731	4,584	4,228	4,372	4,928
South Dakota	3,800	3,668	3,222	2,671	2,253
Tennessee	11,377	10,989	10,112	10,752	9,930
Texas	63,284	64,048	56,171	61,221	57,089
Utah	0	4	1	0	0
Vermont	77	88	0	50	19
Virginia	26,520	25,767	19,937	21,452	21,217
Washington	3,806	2,961	2,771	2,577	2,286
West Virginia	92,898	84,166	79,395	86,292	85,637
Wisconsin	39,217	39,253	35,166	35,054	28,094
Wyoming	4,635	3,432	2,923	2,461	2,769
Total	2,320,712	2,198,804	1,982,008	2,068,178	1,938,002
Total by water power	1,399,825	1,342,689	1,196,616	1,336,893	1,301,547
Total by water power and fuels	3,720,537	3,541,493	3,178,624	3,405,071	3,239,549

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during April, 1921, are as follows: California, 523,560; Florida, 241,824; Georgia, 436,082; Idaho, 220,700; Louisiana, 89,229; Minnesota, 298,436; Mississippi, 656,900; Oregon, 3,198,956; Washington, 1,063,234; Wisconsin, 568,870; and all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, Texas, and Virginia), 444,265.

Electric power produced during December, 1920, and January, February, March, and April, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1920	1921			
	December	January	February	March	April
Alabama	12,993	8,839	8,675	8,050	7,241
Arizona	596	626	675	575	580
Arkansas	14,160	11,604	11,712	11,804	12,282
California	0	0	0	0	0
Colorado	38,695	32,452	27,928	28,654	28,104
Connecticut	56,875	56,183	53,216	50,368	46,743
Delaware	11,390	9,106	8,070	7,895	6,799
District of Columbia	22,239	21,703	18,901	19,572	18,279
Florida	2,773	2,197	2,200	1,926	2,047
Georgia	8,175	8,184	7,171	6,480	6,664
Idaho	0	0	0	0	0
Illinois	408,638	375,066	327,122	334,453	301,453
Indiana	184,367	171,857	152,634	158,290	150,573
Iowa	92,077	89,984	78,335	76,257	67,898
Kansas	45,816	44,374	33,756	39,707	23,404
Kentucky	44,756	43,436	38,935	40,025	37,427
Louisiana	13,439	13,198	12,034	11,917	10,065
Maine	398	51	39	104	140
Maryland	28,140	24,559	18,283	16,156	16,215
Massachusetts	120,872	128,173	124,261	118,183	88,797
Michigan	132,342	119,109	109,963	112,050	109,604
Minnesota	61,258	54,853	50,434	43,710	30,187
Mississippi	12,650	12,121	11,085	10,570	9,137
Missouri	125,687	110,001	94,486	95,948	89,018
Montana	4,036	3,698	3,682	3,799	3,336
Nebraska	43,677	41,710	36,463	35,221	32,661
Nevada	243	221	184	176	180
New Hampshire	3,492	3,557	2,769	2,224	2,184
New Jersey	134,285	117,410	100,255	96,130	89,841
New Mexico	4,028	4,129	3,449	3,664	3,368
New York	420,593	405,664	352,402	360,266	343,951
North Carolina	8,686	8,385	7,254	7,493	6,558
North Dakota	18,993	16,739	14,716	14,716	12,224
Ohio	334,569	303,599	268,859	284,825	259,153
Oklahoma	9,166	12,409	7,992	5,172	4,487
Oregon	155	165	126	120	119
Pennsylvania	476,420	446,380	411,025	409,458	377,007
Rhode Island	15,776	13,843	12,044	11,546	11,085
South Carolina	9,752	9,301	8,845	9,298	10,270
South Dakota	8,190	8,162	7,384	6,690	5,950
Tennessee	24,103	23,422	19,606	21,136	19,253
Texas	20,259	20,361	15,474	20,034	22,045
Utah	8	11	5	0	0
Vermont	468	193	0	181	58
Virginia	39,120	38,425	30,472	32,932	30,799
Washington	4,239	3,583	3,108	3,219	2,828
West Virginia	97,326	85,459	79,204	81,225	77,375
Wisconsin	68,655	70,463	60,900	58,504	45,035
Wyoming	13,158	9,189	7,822	7,902	6,747
Total	3,197,733	2,984,154	2,643,955	2,659,468	2,429,171

State	Fuel oil - barrels				
	1920	1921			
	December	January	February	March	April
Alabama	9,934	7,868	8,013	8,630	9,192
Arizona	17,841	15,872	13,936	15,781	14,501
Arkansas	4,835	9,082	5,825	4,230	3,605
California	305,303	277,733	242,148	238,473	245,745
Colorado	0	0	0	0	0
Connecticut	708	976	1,411	1,094	993
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	59,290	60,116	59,522	60,031	55,250
Georgia	26,561	23,881	20,975	24,100	20,082
Idaho	0	0	0	0	0
Illinois	254	266	201	205	212
Indiana	447	411	360	360	294
Iowa	892	1,128	960	1,054	910
Kansas	66,835	57,605	53,255	48,712	68,871
Kentucky	250	366	335	325	297
Louisiana	45,962	39,362	36,935	39,872	43,547
Maine	2,797	1,381	1,182	1,188	1,232
Maryland	0	5	3	0	0
Massachusetts	21,796	24,560	23,510	29,764	23,039
Michigan	215	226	185	163	162
Minnesota	330	470	340	355	222
Mississippi	8,142	7,974	7,895	7,217	9,006
Missouri	18,050	9,329	4,943	7,989	7,289
Montana	170	209	168	199	192
Nebraska	2,878	2,712	3,196	4,232	4,833
Nevada	0	17	8	0	0
New Hampshire	10	0	0	0	0
New Jersey	123	95	79	96	96
New Mexico	657	634	580	644	625
New York	6,756	9,668	7,812	5,043	4,906
North Carolina	200	100	95	270	190
North Dakota	196	156	143	136	125
Ohio	540	510	510	510	591
Oklahoma	33,614	27,636	27,398	39,769	34,731
Oregon	3,635	6,534	6,470	7,332	4,352
Pennsylvania	178	161	103	135	100
Rhode Island	40,450	45,322	48,090	48,294	43,763
South Carolina	35	35	35	35	35
South Dakota	2,315	2,464	1,637	1,736	1,766
Tennessee	0	0	0	0	0
Texas	249,150	248,726	194,763	241,046	223,146
Utah	0	0	0	0	0
Vermont	30	0	0	0	0
Virginia	210	0	0	0	0
Washington	12,210	8,298	6,607	6,192	3,573
West Virginia	50	0	0	0	0
Wisconsin	301	247	242	235	228
Wyoming	5,896	4,953	1,755	1,506	1,419
Total	949,946	897,088	781,625	846,953	829,120

State	Natural gas - thousands of cubic feet				
	1920	1921			
	December	January	February	March	April
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	217,238	176,572	148,191	154,304	173,663
California	171,449	155,928	84,303	101,551	222,894
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	57,922	65,875	50,176	133,024	92,178
Kentucky	12,801	7,968	6,729	15,961	13,498
Louisiana	102,972	95,093	88,466	90,257	157,757
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,400	1,335	1,048	1,084	998
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,730	4,798	4,670	4,865	8,238
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	360,607a/	305,001b/	206,306c/	108,767d/	353,610e/
Oklahoma	409,766	408,287	399,520	460,918	398,056
Oregon	0	0	0	0	0
Pennsylvania	49,135	48,010	43,681	41,533	36,745
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	143,344	128,678	132,827	121,558	121,393
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	317,256	278,447	263,988	301,428	301,812
Wisconsin	0	0	0	0	0
Wyoming	19,980	28,831	36,923	32,188	33,065
Total	1,873,130	1,707,413	1,469,418	1,570,028	1,916,497

a/ Includes 97,488 M cubic feet of artificial gas.
b/ " 62,751 " " " " " " "
c/ " 52,925 " " " " " " "
d/ " 30,151 " " " " " " "
e/ " 41,679 " " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for January, February, March, and April was 114,200,000, 113,500,000, 109,800,000, and 108,000,000, respectively. The proportion produced by water power was as follows: 37.9, 37.7, 39.3, and 40.2 per cent, respectively.

The curves on page 7 show the average daily production of electricity each month by water power, fuel power, and by both water power and fuel power for 1919, 1920, and for the first four months of 1921. The mean daily rate of production of electricity by public utility plants for April, 1921, is the lowest since September, 1919. The curve of total mean daily output for 1921, however, apparently indicates that there has been no marked decrease in public utility base load since the first of January for the gradual decrease in the rate of production in 1921 is probably the normal decrease that is to be expected during the period of increasing hours of daylight.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

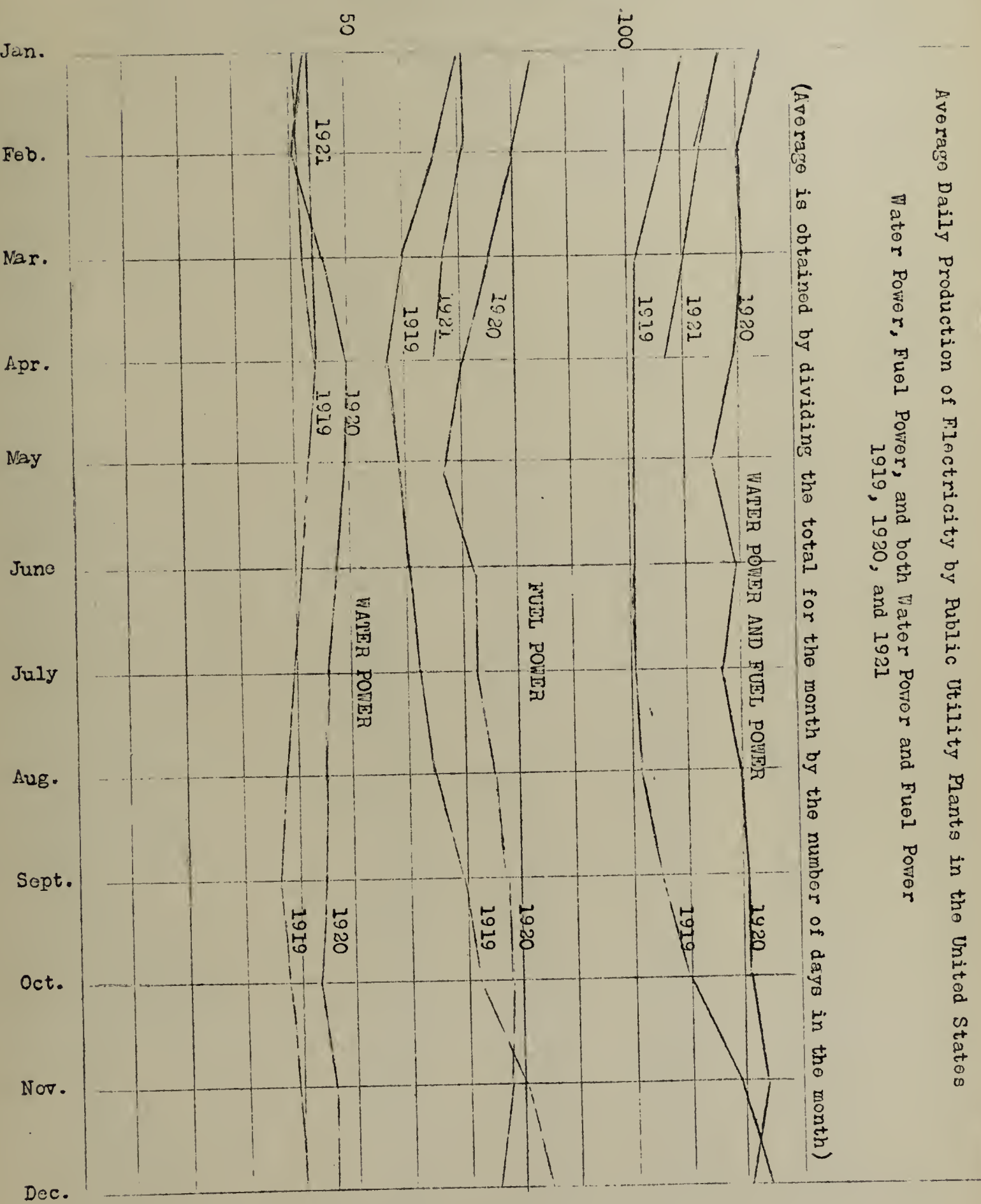
Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power

1919, 1920, and 1921

(Average is obtained by dividing the total for the month by the number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

July 28, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR JANUARY, FEBRUARY, MARCH, APRIL, AND MAY, 1921

Compiled by

Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921 January	February	March	April	May
Alabama	35,930	32,900	36,600	34,037	28,719
Arizona	6,722	6,731	9,305	6,064	6,810
Arkansas	104	96	96	94	60
California	253,412	229,855	264,323	278,212	298,727
Colorado	15,104	13,820	16,049	14,699	15,762
Connecticut	16,176	13,080	18,471	17,768	15,381
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	1,138	883	868	768	728
Georgia	38,960	38,126	40,097	36,632	38,678
Idaho	46,512	40,298	41,771	35,829	47,855
Illinois	11,170	14,626	16,517	15,383	15,663
Indiana	4,154	3,812	4,502	4,342	4,636
Iowa	50,395	46,015	54,942	53,554	54,363
Kansas	1,712	1,502	1,670	3,010	2,275
Kentucky	0	0	0	12	10
Louisiana	0	0	0	0	0
Maine	33,040	29,235	30,898	23,853	26,763
Maryland	275	235	330	254	378
Massachusetts	35,734	29,184	37,839	37,934	34,815
Michigan	60,712	49,092	65,045	64,351	60,535
Minnesota	29,118	24,074	32,698	44,134	43,484
Mississippi	0	0	0	0	0
Missouri	3,291	5,170	5,270	5,985	5,599
Montana	70,484	54,330	55,847	41,882	42,270
Nebraska	1,157	1,025	1,443	1,457	1,477
Nevada	2,570	2,377	2,495	2,556	3,067
New Hampshire	14,573	10,931	14,548	19,179	15,655
New Jersey	243	209	215	215	208
New Mexico	70	54	63	72	73
New York	223,167	186,937	194,958	169,810	166,480
North Carolina	19,051	18,637	19,853	17,919	24,282
North Dakota	0	0	0	0	0
Ohio	3,029	3,039	3,420	3,553	2,868
Oklahoma	278	255	259	176	265
Oregon	35,095	32,644	34,617	33,435	33,314
Pennsylvania	51,005	52,423	56,182	53,220	52,230
Rhode Island	713	342	651	602	822
South Carolina	54,068	52,075	53,349	59,608	64,738
South Dakota	737	638	1,222	1,662	1,589
Tennessee	33,782	30,323	33,983	32,421	33,851
Texas	383	349	302	301	372
Utah	18,125	18,058	19,819	12,532	7,754
Vermont	10,097	9,802	11,159	10,069	8,703
Virginia	21,689	22,353	22,726	20,423	21,708
Washington	101,231	87,300	93,700	94,302	88,561
West Virginia	2,456	2,377	2,545	2,252	2,562
Wisconsin	34,866	31,284	44,706	53,793	53,434
Wyoming	161	120	142	147	140
Total	1,342,689	1,196,616	1,345,495	1,308,501	1,327,664

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1921				
	January	February	March	April	May
Alabama	5,006	4,838	3,845	3,881	8,614
Arizona	3,660	3,236	3,533	3,988	3,700
Arkansas	10,610	9,520	9,892	9,250	9,006
California	51,012	41,290	42,542	54,560	43,807
Colorado	17,511	14,263	14,335	14,304	13,548
Connecticut	38,826	37,011	32,283	31,110	33,443
Delaware	6,472	5,686	5,880	5,440	5,394
District of Columbia	23,385	21,111	21,965	21,532	21,960
Florida	11,693	11,221	11,748	10,848	10,598
Georgia	7,087	6,337	6,807	6,181	6,444
Idaho	140	190	221	221	402
Illinois	247,984	221,776	233,651	212,762	211,030
Indiana	74,246	68,728	69,487	66,991	65,718
Iowa	32,419	29,029	29,762	28,000	27,673
Kansas	34,063	27,905	28,390	25,997	28,427
Kentucky	25,137	21,832	23,858	21,749	22,255
Louisiana	19,776	17,675	19,050	18,362	18,794
Maine	87	95	205	222	206
Maryland	18,203	12,709	10,939	10,709	12,991
Massachusetts	116,313	111,654	99,063	85,710	92,005
Michigan	90,875	88,273	91,660	91,918	94,459
Minnesota	36,286	32,109	23,074	8,628	11,046
Mississippi	5,228	5,043	5,065	4,914	4,916
Missouri	59,005	50,690	50,723	50,969	53,465
Montana	668	615	608	556	567
Nebraska	20,812	18,294	19,586	18,875	19,254
Nevada	46	36	32	32	21
New Hampshire	2,358	2,120	1,646	1,706	1,882
New Jersey	87,186	76,464	79,320	73,330	72,177
New Mexico	1,304	1,108	1,186	1,184	1,210
New York	346,920	304,422	323,991	306,612	302,502
North Carolina	3,833	3,388	3,475	3,168	3,164
North Dakota	2,896	2,514	2,482	2,056	2,023
Ohio	219,394	192,557	209,760	201,757	196,141
Oklahoma	18,980	17,273	18,688	16,033	15,773
Oregon	6,436	4,297	4,352	4,220	3,449
Pennsylvania	294,176	281,427	298,775	281,740	274,380
Rhode Island	19,911	21,346	19,635	17,855	19,155
South Carolina	4,584	4,228	4,370	4,928	3,356
South Dakota	3,668	3,222	2,671	2,232	2,298
Tennessee	10,989	10,112	10,752	9,930	9,794
Texas	64,048	56,171	61,221	57,028	59,977
Utah	4	1	0	0	0
Vermont	88	0	50	19	3
Virginia	25,767	19,937	21,452	21,232	22,650
Washington	2,961	2,771	2,577	2,286	2,151
West Virginia	84,166	79,395	86,516	85,624	97,289
Wisconsin	39,253	35,166	35,424	28,094	29,791
Wyoming	3,432	2,923	2,933	2,769	2,722
Total	2,198,804	1,982,008	2,049,480	1,931,512	1,941,630
Total by water power	1,342,689	1,196,616	1,345,495	1,308,501	1,327,664
Total by water power and fuels	3,541,493	3,178,624	3,394,975	3,240,013	3,269,294

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during May, 1921, are as follows: California, 601,000; Florida, 223,000; Georgia, 421,000; Idaho, 402,000; Louisiana, 73,000; Minnesota, 276,000; Mississippi, 660,000; Oregon, 2,877,000; Washington, 1,043,000; Wisconsin, 281,000; and all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, Texas, and Virginia), 729,000.

Electric power produced during January, February, March, April, and May, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	January	February	March	April	May
Alabama	8,839	8,675	8,050	7,241	13,335
Arizona	626	675	575	580	150
Arkansas	11,604	11,712	11,324	12,222	11,919
California	0	0	0	0	0
Colorado	32,452	27,928	28,654	28,104	26,654
Connecticut	56,183	53,216	50,438	46,743	48,382
Delaware	3,106	8,070	7,895	6,799	6,657
District of Columbia	21,703	18,901	19,572	18,279	18,768
Florida	2,197	2,200	1,926	2,047	2,003
Georgia	8,184	7,171	6,549	6,681	5,943
Idaho	0	0	0	0	0
Illinois	375,066	327,122	334,651	304,497	304,497
Indiana	171,857	152,634	158,590	150,495	146,620
Iowa	89,984	78,335	75,141	68,280	64,363
Kansas	44,374	33,756	30,836	22,955	21,318
Kentucky	43,436	38,935	39,950	37,427	38,482
Louisiana	13,198	12,034	11,917	10,065	9,338
Maine	51	39	104	140	198
Maryland	24,559	18,283	16,586	16,215	18,210
Massachusetts	128,173	124,261	103,130	88,797	93,453
Michigan	119,109	109,963	111,136	108,094	106,987
Minnesota	54,853	50,434	40,437	22,647	23,914
Mississippi	12,121	11,085	10,785	9,352	9,352
Missouri	110,001	94,486	95,948	88,916	88,391
Montana	3,698	3,682	3,799	3,336	3,561
Nebraska	41,710	36,463	35,186	32,661	31,808
Nevada	221	184	176	180	117
New Hampshire	3,557	2,769	2,314	2,234	2,682
New Jersey	117,410	100,255	96,130	89,467	92,664
New Mexico	4,129	3,449	3,664	3,368	2,406
New York	405,664	352,402	360,255	343,910	338,350
North Carolina	8,385	7,254	7,493	6,558	6,712
North Dakota	16,739	14,716	14,716	12,224	12,059
Ohio	303,599	268,859	284,825	258,952	244,179
Oklahoma	12,409	7,992	5,172	4,487	3,968
Oregon	165	126	120	119	65
Pennsylvania	446,380	411,025	409,437	376,968	384,521
Rhode Island	13,843	12,044	11,546	11,085	9,607
South Carolina	9,301	8,845	9,288	10,270	6,471
South Dakota	8,162	7,384	6,690	5,950	5,467
Tennessee	23,422	19,606	21,136	19,253	18,244
Texas	20,361	15,474	20,034	22,045	19,590
Utah	11	5	0	0	0
Vermont	193	0	181	58	14
Virginia	38,425	30,472	32,932	30,809	32,021
Washington	3,583	3,108	3,219	2,828	2,482
West Virginia	85,459	79,204	81,675	77,375	89,425
Wisconsin	70,463	60,900	58,504	45,035	46,269
Wyoming	9,189	7,822	7,902	6,747	6,732
Total	2,984,154	2,643,955	2,640,588	2,422,495	2,418,348

State	Fuel oil - barrels				
	1921				
	January	February	March	April	May
Alabama	7,868	8,013	8,630	9,192	8,283
Arizona	15,872	13,936	16,001	22,437	17,009
Arkansas	9,082	5,825	4,341	3,665	1,628
California	277,733	242,148	238,477	247,067	214,074
Colorado	0	0	0	0	0
Connecticut	976	1,411	1,094	993	1,929
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	60,116	59,522	61,717	55,165	55,879
Georgia	23,881	20,975	24,100	20,082	24,310
Idaho	0	0	0	0	0
Illinois	266	201	205	155	155
Indiana	411	360	360	294	316
Iowa	1,128	960	1,054	910	950
Kansas	57,605	53,255	48,554	70,595	76,718
Kentucky	366	335	225	297	290
Louisiana	39,362	36,935	39,872	43,547	43,691
Maine	1,381	1,182	1,188	1,232	1,147
Maryland	5	3	0	0	0
Massachusetts	24,560	23,510	29,764	23,039	25,848
Michigan	226	185	163	162	128
Minnesota	470	340	355	222	279
Mississippi	7,974	7,895	7,217	9,006	9,006
Missouri	9,329	4,943	7,989	7,289	8,075
Montana	209	168	199	192	183
Nebraska	2,712	3,196	4,208	4,833	7,464
Nevada	17	8	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	95	79	96	96	102
New Mexico	634	580	644	625	1,100
New York	9,668	7,812	5,043	4,906	5,520
North Carolina	100	95	270	190	140
North Dakota	156	143	136	125	83
Ohio	510	510	510	591	580
Oklahoma	27,636	27,398	39,943	34,869	35,486
Oregon	6,534	6,470	7,332	4,352	1,958
Pennsylvania	161	103	135	100	79
Rhode Island	45,322	48,090	48,294	43,763	53,941
South Carolina	35	35	35	35	35
South Dakota	2,464	1,637	1,736	1,656	1,601
Tennessee	0	0	0	0	0
Texas	248,726	194,763	241,046	222,699	243,692
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	8,298	6,607	6,192	3,573	362
West Virginia	0	0	0	0	0
Wisconsin	247	242	235	228	299
Wyoming	4,953	1,755	1,506	1,419	1,655
Total	897,088	781,625	848,866	839,601	844,035

State	Natural gas - thousands of cubic feet				
			1921		
	January	February	March	April	May
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	176,572	148,191	154,643	173,663	182,372
California	155,928	84,303	101,551	222,894	208,662
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	65,875	50,176	133,024	92,178	173,382
Kentucky	7,968	6,729	15,961	13,498	13,431
Louisiana	95,093	88,466	90,257	104,145	89,998
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,335	1,048	1,084	998	1,036
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	4,798	4,670	4,865	8,238	3,449
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	305,001a/	206,306b/	106,816c/	353,462d/	451,332e/
Oklahoma	408,287	399,520	443,816	389,400	417,203
Oregon	0	0	0	0	0
Pennsylvania	48,010	43,681	38,883	36,745	37,773
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	128,678	132,827	121,558	121,393	113,918
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	278,447	263,988	301,428	301,514	263,657
Wisconsin	0	0	0	0	0
Wyoming	28,831	36,923	32,188	33,065	29,787
Total	1,707,413	1,469,418	1,548,664	1,853,783	1,986,590

a/ Includes 62,751 M cubic feet of artificial gas.
b/ " 52,925 " " " " " "
c/ " 30,151 " " " " " "
d/ " 41,679 " " " " " "
e/ " 53,381 " " " " " "

State	Natural gas - thousands of cubic feet				
	1921				
	January	February	March	April	May
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	176,572	148,191	154,643	173,663	182,372
California	155,928	84,303	101,551	222,894	208,662
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	65,875	50,176	133,024	92,178	173,382
Kentucky	7,968	6,729	15,961	13,498	13,431
Louisiana	95,093	88,466	90,257	104,145	89,998
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,335	1,048	1,084	998	1,036
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	4,798	4,670	4,865	8,238	3,449
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	305,001a/	206,306b/	106,816c/	353,462d/	451,332e/
Oklahoma	408,287	399,520	443,816	389,400	417,203
Oregon	0	0	0	0	0
Pennsylvania	48,010	43,681	38,883	36,745	37,773
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	128,678	132,827	121,558	121,393	113,918
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	278,447	263,988	301,428	301,514	263,657
Wisconsin	0	0	0	0	0
Wyoming	28,831	36,923	32,188	33,065	29,787
Total	1,707,413	1,469,418	1,548,664	1,853,783	1,986,590

a/ Includes 62,751 M cubic feet of artificial gas.
b/ " 52,925 " " " " " "
c/ " 30,151 " " " " " "
d/ " 41,679 " " " " " "
e/ " 53,381 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for January, February, March, April, and May was 114,200,000, 113,400,000, 109,600,000, 108,000,000, and 105,400,000, respectively. The proportion produced by water power was as follows: 37.9, 37.7, 39.6, 40.4, and 40.6 per cent, respectively.

The curves on page 7 show the average daily production of electricity each month by water power, fuel power, and by both water power and fuel power for 1919, 1920, and for the first five months of 1921. The mean daily rate of production of electricity by public utility plants for May, 1921, is the lowest since August, 1919. It should be noted however, as has been pointed out in previous reports, that the decrease in the daily output of electricity by public utility plants since January as shown by the curve of total output for 1921 is probably the normal seasonal decrease due to the increasing hours of daylight.

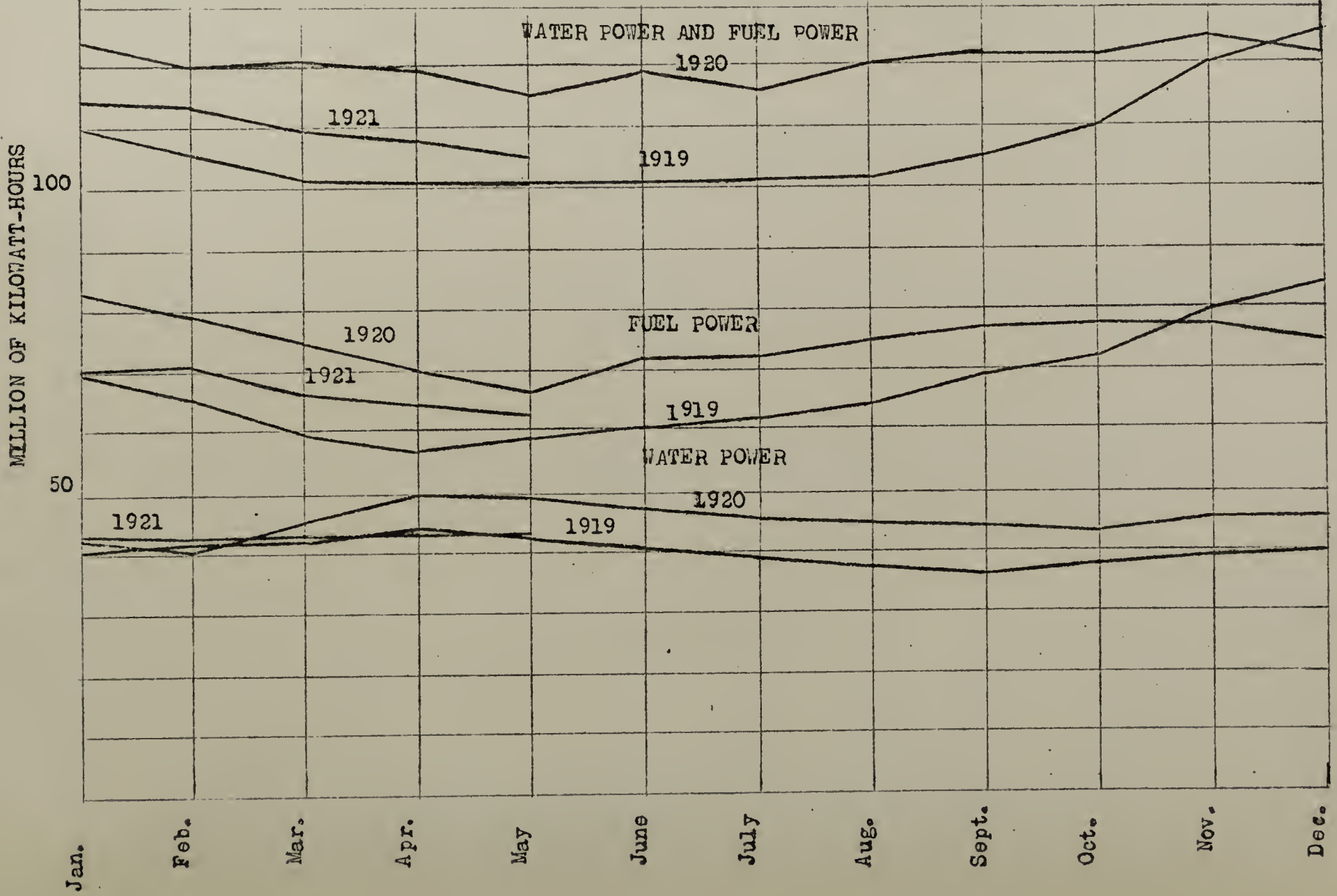
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

August 26, 1921.

Office of the Director

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR FEBRUARY, MARCH, APRIL, MAY, AND JUNE, 1921.

Compiled by

Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921 February	March	April	May	June
Alabama	32,900	36,600	34,037	28,719	17,229
Arizona	6,731	9,305	6,064	6,810	9,867
Arkansas	96	96	94	60	122
California	229,855	264,323	278,212	298,727	308,058
Colorado	13,820	16,049	14,699	15,762	14,556
Connecticut	13,080	18,471	17,318	14,928	7,114
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	883	868	768	728	884
Georgia	38,126	40,097	36,632	38,678	38,639
Idaho	40,298	41,771	35,829	47,855	47,796
Illinois	14,626	16,517	15,383	15,663	15,132
Indiana	3,812	4,502	4,342	4,636	3,464
Iowa	46,015	54,942	53,554	54,363	48,352
Kansas	1,502	1,670	3,010	2,275	2,352
Kentucky	0	12	12	10	10
Louisiana	0	0	0	0	0
Maine	29,235	30,898	23,853	26,763	26,233
Maryland	235	330	254	378	257
Massachusetts	29,184	37,839	37,934	34,850	19,237
Michigan	49,092	65,045	64,351	60,560	52,243
Minnesota	24,074	32,698	44,134	43,484	40,885
Mississippi	0	0	0	0	0
Missouri	5,170	5,270	5,985	5,599	5,132
Montana	54,330	55,847	41,882	42,270	43,902
Nebraska	1,025	1,443	1,457	1,477	1,615
Nevada	2,377	2,495	2,556	3,067	3,241
New Hampshire	10,931	14,548	19,179	15,655	7,720
New Jersey	209	215	215	208	131
New Mexico	54	63	72	73	71
New York	186,937	194,958	169,815	166,498	150,413
North Carolina	18,617	19,853	22,783	24,282	19,687
North Dakota	0	0	0	0	0
Ohio	3,039	3,420	3,553	2,868	1,675
Oklahoma	255	259	176	265	76
Oregon	32,644	34,617	33,435	33,314	30,761
Pennsylvania	52,423	56,182	53,220	52,230	37,996
Rhode Island	342	651	602	822	301
South Carolina	52,075	53,349	54,987	64,738	58,383
South Dakota	638	1,222	1,662	1,589	1,111
Tennessee	30,323	33,983	32,421	33,851	25,763
Texas	349	302	301	372	360
Utah	16,971	19,819	12,532	7,754	7,847
Vermont	9,802	11,159	10,069	8,936	8,287
Virginia	22,371	22,726	20,423	21,708	14,525
Washington	87,300	93,700	94,275	88,536	90,102
West Virginia	2,377	2,545	2,252	2,562	2,558
Wisconsin	31,284	44,706	53,793	53,434	45,061
Wyoming	120	142	147	140	137
Total	1,195,527	1,345,507	1,308,272	1,327,497	1,209,335

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1921				
	February	March	April	May	June
Alabama	4,838	3,845	3,881	8,614	20,269
Arizona	3,236	3,533	3,988	3,700	3,813
Arkansas	9,527	9,892	9,250	8,997	10,262
California	41,290	42,542	54,560	43,807	47,516
Colorado	14,263	14,335	14,304	13,548	11,518
Connecticut	37,011	32,283	31,110	33,443	42,614
Delaware	5,686	5,880	5,440	5,394	5,404
District of Columbia	21,111	21,965	21,532	21,960	21,342
Florida	11,243	11,748	10,898	10,598	10,349
Georgia	6,337	6,807	6,181	6,444	7,137
Idaho	190	221	221	402	226
Illinois	221,776	233,651	212,762	211,109	212,919
Indiana	68,728	69,487	66,991	65,767	67,374
Iowa	29,029	29,762	28,000	27,677	27,320
Kansas	27,893	28,390	25,997	28,463	29,106
Kentucky	21,820	23,858	21,749	22,247	22,432
Louisiana	17,675	19,050	18,771	19,244	19,732
Maine	95	205	247	229	378
Maryland	12,709	10,939	10,709	12,991	21,800
Massachusetts	100,306	99,063	85,710	92,005	101,403
Michigan	88,273	91,660	91,918	94,465	102,608
Minnesota	32,109	23,074	8,628	11,046	12,642
Mississippi	5,043	5,065	4,914	4,912	4,967
Missouri	50,690	50,723	50,797	53,006	55,611
Montana	615	608	556	566	563
Nebraska	18,294	19,586	18,875	19,254	19,969
Nevada	36	32	32	21	21
New Hampshire	2,120	1,646	1,706	1,882	3,068
New Jersey	76,464	79,320	73,330	72,200	72,784
New Mexico	1,108	1,186	1,184	1,211	1,163
New York	304,422	323,991	306,612	302,502	309,838
North Carolina	3,388	3,475	3,168	3,149	3,343
North Dakota	2,514	2,482	2,056	2,033	2,174
Ohio	192,557	209,760	201,377	195,820	196,370
Oklahoma	17,273	18,688	16,033	15,829	17,200
Oregon	4,297	4,352	4,220	3,449	4,642
Pennsylvania	281,276	298,775	281,740	274,352	271,079
Rhode Island	21,346	19,635	17,855	19,155	31,320
South Carolina	4,228	4,370	4,684	3,356	5,263
South Dakota	3,222	2,671	2,232	2,298	2,942
Tennessee	10,112	10,752	9,930	9,792	10,059
Texas	56,171	61,221	57,031	59,994	60,999
Utah	1	0	0	0	0
Vermont	0	50	19	3	261
Virginia	19,937	21,452	21,232	22,650	29,097
Washington	2,771	2,577	2,282	2,177	2,148
West Virginia	79,395	86,516	85,624	97,289	91,654
Wisconsin	35,166	35,424	28,094	29,791	30,086
Wyoming	2,923	2,933	2,769	2,722	2,689
Total	1,970,514	2,049,480	1,931,199	1,941,563	2,027,474
Total by water power	1,195,527	1,345,507	1,308,372	1,327,497	1,209,335
Total by water power and fuel	3,166,041	3,394,987	3,239,471	3,269,060	3,236,809

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during June, 1921, are asfollows: California, 657,000; Florida, 223,000; Georgia, 436,000; Idaho, 226,000; Louisiana, 101,000; Minnesota, 241,000; Mississippi, 385,000; Oregon, 4,387,000; Washington, 991,000; Wisconsin, 265,000; and all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, and Texas), 813,000.

Electric power produced during February, March, April, May, and June, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons. 1921				
	February	March	April	May	June
Alabama	8,675	8,050	7,241	13,335	27,798
Arizona	675	575	580	150	0
Arkansas	12,292	12,324	12,024	11,573	11,925
California	0	0	0	0	0
Colorado	27,928	28,654	28,104	26,654	22,483
Connecticut	53,216	50,438	46,743	48,382	56,829
Delaware	8,070	7,895	6,799	6,657	6,173
District of Columbia	18,901	19,572	18,279	18,768	18,067
Florida	2,200	1,926	2,047	2,003	2,106
Georgia	7,171	6,549	6,681	5,943	7,325
Idaho	0	0	0	0	0
Illinois	327,122	334,651	301,573	304,535	302,074
Indiana	152,634	158,590	150,495	144,864	142,337
Iowa	78,335	75,141	68,280	64,381	62,440
Kansas	33,580	30,836	22,955	21,491	20,407
Kentucky	38,915	39,950	37,427	38,438	38,712
Louisiana	12,034	11,917	10,065	9,338	9,818
Maine	39	104	140	198	233
Maryland	18,283	16,586	16,215	18,210	27,089
Massachusetts	109,544	103,130	88,797	93,453	104,115
Michigan	109,963	111,136	108,094	106,917	114,679
Minnesota	50,434	40,437	22,647	23,914	23,884
Mississippi	11,085	10,785	9,352	9,312	9,969
Missouri	94,486	95,948	88,072	87,260	84,162
Montana	3,682	3,799	3,336	3,556	2,745
Nebraska	36,463	35,186	32,661	31,808	33,310
Nevada	184	176	180	117	127
New Hampshire	2,769	2,314	2,234	2,682	4,146
New Jersey	100,255	96,130	89,467	92,715	89,786
New Mexico	3,449	3,664	3,368	2,406	2,190
New York	352,402	360,255	343,910	338,960	333,309
North Carolina	7,254	7,493	6,558	6,827	7,214
North Dakota	14,716	14,716	12,224	12,099	11,792
Ohio	268,859	284,825	257,827	244,065	248,482
Oklahoma	7,992	5,172	4,487	3,968	3,743
Oregon	126	120	119	65	0
Pennsylvania	410,966	409,437	376,968	384,664	367,976
Rhode Island	12,044	11,546	11,085	9,607	8,323
South Carolina	8,845	9,288	9,730	6,621	10,545
South Dakota	7,384	6,690	5,950	5,542	6,413
Tennessee	19,606	21,136	19,253	18,234	19,745
Texas	15,474	20,034	21,800	18,458	17,974
Utah	5	0	0	0	0
Vermont	0	181	58	14	216
Virginia	30,472	32,932	30,809	32,111	36,764
Washington	3,108	3,219	2,788	2,542	2,199
West Virginia	79,204	81,675	77,375	89,425	88,343
Wisconsin	60,900	58,504	45,035	46,269	43,038
Wyoming	7,822	7,902	6,747	6,732	6,452
Total	2,629,563	2,641,588	2,416,579	2,415,263	2,437,457

State	Fuel oil - barrels				
	1921				
	February	March	April	May	June
Alabama	8,013	8,630	9,192	8,283	6,293
Arizona	13,936	16,001	22,437	17,009	18,496
Arkansas	5,875	4,341	3,665	1,628	7,318
California	242,148	238,477	247,067	214,074	207,795
Colorado	0	0	0	0	0
Connecticut	1,411	1,094	993	1,929	3,196
Delaware	0	0	0	0	0
District of Columbia	CO	0	0	0	0
Florida	59,603	61,717	55,495	55,879	52,565
Georgia	20,975	24,100	20,082	24,310	22,742
Idaho	0	0	0	0	0
Illinois	201	205	217	160	188
Indiana	360	360	294	316	302
Iowa	960	1,054	910	956	867
Kansas	53,035	48,554	70,595	76,718	82,941
Kentucky	235	225	297	290	285
Louisiana	36,935	39,872	46,652	46,495	41,602
Maine	1,182	1,188	1,327	1,263	2,095
Maryland	3	0	0	0	0
Massachusetts	23,510	29,764	23,039	25,848	25,990
Michigan	185	163	162	128	207
Minnesota	340	355	222	279	303
Mississippi	7,895	7,217	9,006	10,786	10,635
Missouri	4,943	7,989	7,289	8,075	24,615
Montana	168	199	192	183	180
Nebraska	3,196	4,208	4,833	7,464	6,859
Nevada	8	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	79	96	96	102	90
New Mexico	580	644	625	1,096	1,546
New York	7,812	5,043	4,906	5,620	7,896
North Carolina	95	270	190	140	146
North Dakota	143	136	125	83	94
Ohio	510	510	591	580	588
Oklahoma	27,398	39,943	34,869	35,216	44,789
Oregon	6,470	7,332	4,352	1,958	1,208
Pennsylvania	103	135	100	79	365
Rhode Island	48,090	48,294	43,763	53,941	91,391
South Carolina	35	35	35	35	0
South Dakota	1,637	1,736	1,656	1,671	1,777
Tennessee	0	0	0	0	0
Texas	194,763	241,046	222,699	245,192	247,401
Utah	0	0	0	0	0
Vermont	0	0	0	0	1,100
Virginia	0	0	0	0	0
Washington	6,607	6,192	3,573	3,640	3,480
West Virginia	0	0	0	0	0
Wisconsin	242	235	228	299	289
Wyoming	1,755	1,506	1,419	1,655	1,324
Total	781,436	848,866	843,193	853,380	918,958

State	Natural gas - thoudands of cubic feet				
	1921				
	February	March	April	May	June
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	148,191	154,643	173,663	182,372	192,791
California	84,303	101,551	222,894	208,662	288,592
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	50,176	133,024	92,178	173,382	193,696
Kentucky	6,729	15,961	13,498	13,431	13,973
Louisiana	88,466	90,257	104,145	89,998	94,677
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,048	1,084	998	1,036	1,039
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	4,670	4,865	8,238	5,699	6,764
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	204,220a/	106,816b/	353,462c/	451,332d/	393,953e/
Oklahoma	399,520	443,816	389,400	420,808	442,954
Oregon	0	0	0	0	0
Pennsylvania	41,031	38,883	36,745	37,803	39,644
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	132,827	121,558	121,393	113,818	124,987
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	263,988	301,428	301,514	263,308	235,401
Wisconsin	0	0	0	0	0
Wyoming	36,923	32,188	33,965	29,787	32,963
Total	1,464,682	1,548,664	1,853,783	1,994,126	2,064,024

a/ Includes 52,925 M cubic feet of artificial gas.
b/ " 30,151 " " " " " " "
c/ " 41,679 " " " " " " "
d/ " 53,381 " " " " " " "
e/ " 28,150 " " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for January, February, March, April, May, and June was 114,200,000, 113,400,000, 109,600,000, 108,000,000, 105,400,000, and 107,900,000 respectively. The proportion produced by water power was as follows: 37.9, 37.7, 39.6, 40.4, 40.6, and 37.4 per cent, respectively.

The curves on page 7 show the average daily production of electricity each month by water power, fuel power, and by both water power and fuel power for 1919, 1920, and for the first six months of 1921. The mean daily output for June shows an increase in output as compared with May, while the increase is comparatively small the addition of the June value to the curve for 1921 apparently confirms the statements in previous reports that there has been but little or no reduction of the base load of public utility companies since January. The reduction in output probably being the normal seasonal change. The curves of water power output show that the output by water power during 1921 is practically the same as for 1919 indicating that the water supply for power purposes during 1919 and 1921 was practically the same and that the increase in output in 1921 as compared with 1919 was furnished by fuel produced power.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

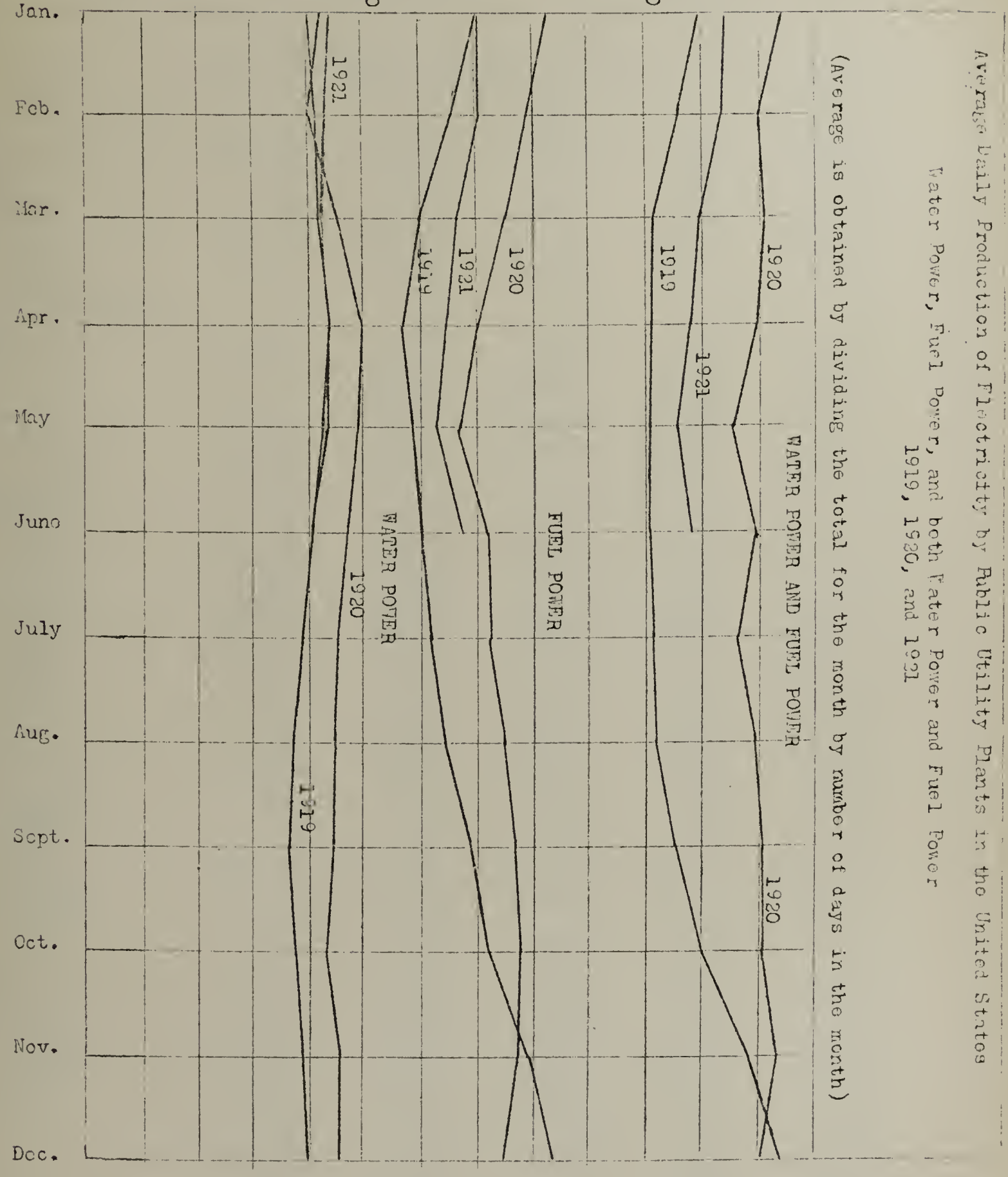
Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power

1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — September 20, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR MARCH, APRIL, MAY, JUNE, AND JULY, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921				
	March	April	May	June	July
Alabama	36,000	34,037	28,719	17,229	22,589
Arizona	9,305	6,064	6,810	9,867	10,081
Arkansas	96	94	60	122	132
California	264,323	278,212	298,727	308,058	314,220
Colorado	16,049	14,699	15,762	14,556	15,110
Connecticut	18,471	17,318	14,928	7,114	7,866
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	868	768	728	884	888
Georgia	40,097	36,632	38,678	38,689	38,545
Idaho	41,771	35,829	47,855	47,796	55,228
Illinois	16,517	15,383	15,663	15,132	14,767
Indiana	4,502	4,342	4,636	3,580	2,418
Iowa	54,942	53,554	54,303	48,352	49,686
Kansas	1,670	3,010	2,275	2,352	1,745
Kentucky	12	12	10	10	10
Louisiana	0	0	0	0	0
Maine	30,898	23,853	26,763	26,233	25,389
Maryland	330	254	378	257	248
Massachusetts	37,839	37,934	34,850	18,967	25,156
Michigan	65,045	64,351	60,560	52,239	49,784
Minnesota	32,698	44,134	43,484	40,885	36,594
Mississippi	0	0	0	0	0
Missouri	5,270	5,985	5,599	5,132	2,930
Montana	55,847	41,882	42,270	43,902	44,624
Nebraska	1,443	1,457	1,477	1,615	1,645
Nevada	2,495	2,556	3,081	3,342	3,523
New Hampshire	14,548	19,179	15,655	7,720	9,530
New Jersey	215	215	208	131	130
New Mexico	63	72	73	71	75
New York	194,958	169,815	166,498	151,332	157,208
North Carolina	19,853	22,783	24,282	24,795	23,907
North Dakota	0	0	0	0	0
Ohio	3,420	3,553	2,868	1,675	1,517
Oklahoma	259	176	265	76	225
Oregon	34,617	33,435	33,314	30,761	30,640
Pennsylvania	56,182	53,220	52,230	37,996	38,384
Rhode Island	651	602	822	301	584
South Carolina	53,349	54,987	59,428	59,782	58,934
South Dakota	1,222	1,662	1,589	1,111	744
Tennessee	33,983	32,421	33,851	25,753	25,477
Texas	302	301	372	360	364
Utah	19,819	12,532	7,754	7,834	8,288
Vermont	11,159	10,069	8,936	8,287	7,885
Virginia	22,726	20,423	21,708	14,525	13,846
Washington	93,700	94,275	88,536	90,102	92,824
West Virginia	2,545	2,252	2,562	1,848	1,629
Wisconsin	44,706	53,793	53,434	45,056	33,263
Wyoming	142	147	140	137	147
Total	1,345,507	1,308,272	1,322,201	1,215,976	1,226,779

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS 1921				
	March	April	May	June	July
Alabama	3,645	3,881	8,614	20,269	15,136
Arizona	3,533	3,988	3,700	3,813	3,133
Arkansas	9,892	9,250	8,984	10,269	10,764
California	42,542	54,560	43,807	47,516	60,776
Colorado	14,335	14,304	13,548	11,533	13,901
Connecticut	32,283	31,110	33,443	42,614	39,744
Delaware	5,880	5,440	5,394	5,404	5,527
District of Columbia	21,965	21,532	21,960	21,342	21,318
Florida	11,748	10,898	10,598	10,349	10,440
Georgia	6,807	6,181	6,444	7,137	6,812
Idaho	221	221	402	226	395
Illinois	233,651	212,762	211,109	212,917	215,997
Indiana	69,487	66,991	65,767	67,373	67,313
Iowa	29,762	28,000	27,677	27,349	28,240
Kansas	28,390	25,997	28,461	29,132	32,710
Kentucky	23,858	21,749	22,247	22,432	22,833
Louisiana	19,050	18,771	19,244	19,732	19,461
Maine	205	247	229	378	513
Maryland	10,939	10,709	12,991	22,713	22,098
Massachusetts	99,063	85,710	92,005	101,407	94,775
Michigan	91,660	91,918	94,465	102,608	105,847
Minnesota	23,074	8,628	11,046	12,642	21,456
Mississippi	5,065	4,914	4,912	4,986	4,981
Missouri	50,723	50,797	53,006	55,647	53,519
Montana	608	556	566	563	614
Nebraska	19,586	18,875	19,254	19,963	20,738
Nevada	32	32	25	25	29
New Hampshire	1,646	1,706	1,882	3,068	2,786
New Jersey	79,320	73,330	72,200	72,784	72,980
New Mexico	1,186	1,184	1,211	1,159	1,192
New York	323,991	306,612	302,502	309,838	313,880
North Carolina	3,475	3,168	3,149	3,343	3,690
North Dakota	2,482	2,056	2,033	2,174	2,486
Ohio	209,760	201,377	195,820	196,352	192,612
Oklahoma	18,688	16,033	15,829	17,200	17,211
Oregon	4,352	4,220	3,449	4,642	5,434
Pennsylvania	298,775	281,740	274,352	271,079	263,390
Rhode Island	19,635	17,855	19,155	31,320	26,036
South Carolina	4,370	4,684	3,341	3,874	3,597
South Dakota	2,671	2,232	2,326	2,979	3,473
Tennessee	10,752	9,930	9,792	10,059	10,248
Texas	61,221	57,031	59,994	61,134	63,951
Utah	0	0	0	0	0
Vermont	50	19	3	261	480
Virginia	21,452	21,232	22,650	29,097	30,998
Washington	2,577	2,282	2,177	2,148	1,936
West Virginia	86,516	85,624	97,289	92,281	88,589
Wisconsin	35,424	28,094	29,791	30,088	36,482
Wyoming	2,933	2,769	2,722	2,683	2,676
Total	2,049,480	1,931,199	1,941,535	2,027,902	2,043,197
Total by water power	1,345,507	1,308,272	1,322,201	1,215,976	1,226,779
Total by water power and fuel	3,394,987	3,239,471	3,263,766	3,243,878	3,269,976

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during July, 1921, are as follows: California, 610,000; Florida, 223,000; Georgia, 429,000; Idaho, 395,000; Louisiana, 92,000; Minnesota, 218,000; Mississippi, 390,000; Oregon, 5,334,000; Washington, 942,000; Wisconsin, 395,000; and all other States (Alabama, Arizona, Arkansas, Maine, Michigan, New Mexico, Oklahoma, and Texas), 741,000.

Electric power produced during March, April, May, June, and July, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	March	April	May	June	July
Alabama	8,050	7,241	13,335	27,798	20,734
Arizona	575	580	150	0	0
Arkansas	12,324	12,024	11,344	9,874	10,298
California	0	0	0	0	0
Colorado	28,654	28,104	26,654	22,587	28,018
Connecticut	50,438	46,743	48,382	56,829	53,615
Delaware	7,895	6,799	6,657	6,173	6,238
District of Columbia	19,572	18,279	18,768	18,067	18,948
Florida	1,926	2,047	2,003	1,806	1,902
Georgia	6,549	6,681	5,943	7,325	6,971
Idaho	0	0	0	0	0
Illinois	334,651	301,573	304,535	302,094	306,562
Indiana	158,590	150,495	144,864	142,337	144,274
Iowa	75,141	68,280	64,381	62,420	63,399
Kansas	30,836	22,955	21,441	20,329	18,221
Kentucky	39,950	37,427	38,438	38,712	38,725
Louisiana	11,917	10,065	9,338	9,818	10,178
Maine	104	140	198	233	318
Maryland	16,586	16,215	18,210	27,789	26,112
Massachusetts	103,130	88,797	93,453	104,135	99,426
Michigan	111,136	108,094	106,917	114,679	118,915
Minnesota	40,437	22,647	23,914	23,884	31,956
Mississippi	10,785	9,352	9,312	9,969	9,850
Missouri	95,948	88,072	87,260	84,327	79,596
Montana	3,799	3,336	3,556	3,500	3,787
Nebraska	35,186	32,661	31,808	33,315	35,432
Nevada	176	180	117	127	130
New Hampshire	2,314	2,234	2,682	4,146	3,100
New Jersey	96,130	89,467	92,715	89,786	97,273
New Mexico	3,664	3,368	2,406	2,186	2,123
New York	360,255	343,910	338,960	332,044	345,496
North Carolina	7,493	6,558	6,827	7,214	8,722
North Dakota	14,716	12,224	12,099	11,792	13,092
Ohio	284,825	257,827	244,065	248,698	260,710
Oklahoma	5,172	4,487	3,968	3,743	2,904
Oregon	120	119	65	0	0
Pennsylvania	409,437	376,968	384,664	367,976	344,727
Rhode Island	11,546	11,085	9,607	8,323	8,447
South Carolina	9,288	9,730	6,581	7,545	7,768
South Dakota	6,690	5,950	5,542	6,413	7,383
Tennessee	21,136	19,253	18,234	19,745	18,884
Texas	20,034	21,800	18,458	18,426	19,304
Utah	0	0	0	0	0
Vermont	181	58	14	216	580
Virginia	32,932	30,809	32,111	36,764	40,540
Washington	3,219	2,788	2,642	2,199	2,180
West Virginia	81,675	77,375	89,425	89,217	88,721
Wisconsin	58,504	45,035	46,334	48,103	49,568
Wyoming	7,902	6,747	6,732	6,398	6,523
Total	2,641,588	2,416,579	2,415,009	2,434,061	2,453,040

State	Fuel oil - barrels				
	1921				
	March	April	May	June	July
Alabama	8,630	9,192	8,283	6,293	7,158
Arizona	16,001	22,437	17,009	18,496	14,984
Arkansas	4,341	3,665	1,628	7,318	20,359
California	238,477	247,067	214,074	207,795	252,308
Colorado	0	0	0	0	0
Connecticut	1,094	993	1,929	3,196	2,734
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	61,717	55,495	55,879	52,865	51,506
Georgia	24,100	20,082	24,310	22,742	22,416
Idaho	0	0	0	0	0
Illinois	205	217	160	188	184
Indiana	360	294	316	302	315
Iowa	1,054	910	956	867	914
Kansas	48,554	70,595	76,718	82,950	103,075
Kentucky	225	297	290	285	273
Louisiana	39,872	46,652	46,495	41,602	42,833
Maine	1,188	1,327	1,263	2,095	2,250
Maryland	0	0	0	0	23
Massachusetts	29,764	23,039	25,848	25,990	25,731
Michigan	163	162	128	207	197
Minnesota	355	222	279	303	371
Mississippi	7,217	9,006	10,736	10,655	10,455
Missouri	7,989	7,239	8,075	24,615	31,600
Montana	199	192	183	180	175
Nebraska	4,208	4,833	7,464	6,859	8,445
Nevada	0	0	63	28	43
New Hampshire	0	0	0	0	0
New Jersey	96	96	102	90	98
New Mexico	644	625	1,096	1,546	1,906
New York	5,043	4,906	5,620	7,896	9,412
North Carolina	270	190	140	146	118
North Dakota	136	125	83	94	105
Ohio	510	591	580	588	587
Oklahoma	39,943	34,869	35,216	44,789	70,283
Oregon	7,332	4,352	1,958	1,208	563
Pennsylvania	135	100	79	365	361
Rhode Island	48,294	43,763	53,941	91,391	76,123
South Carolina	35	35	35	0	0
South Dakota	1,736	1,656	1,747	1,876	1,925
Tennessee	0	0	0	0	0
Texas	241,046	222,699	245,192	246,736	261,483
Utah	0	0	0	0	0
Vermont	0	0	0	1,100	2,029
Virginia	0	0	0	0	0
Washington	6,192	3,573	3,640	3,480	4,326
West Virginia	0	0	0	0	0
Wisconsin	235	228	299	307	271
Wyoming	1,506	1,419	1,655	1,324	1,312
Total	848,866	843,193	853,519	918,768	1,029,251

State	Natural gas - thousands of cubic feet				
	1921				
	March	April	May	June	July
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	154,643	173,663	182,372	197,015	133,039
California	101,551	222,894	208,662	288,592	366,115
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	133,024	92,178	173,382	193,696	229,553
Kentucky	15,961	13,498	13,431	13,973	13,423
Louisiana	90,257	104,145	89,998	94,677	99,923
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,084	998	1,036	1,039	1,127
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	4,865	8,238	5,699	6,764	6,481
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	106,816a/	353,432b/	451,332c/	393,953d/	331,853e/
Oklahoma	443,816	389,400	420,808	442,954	294,927
Oregon	0	0	0	0	0
Pennsylvania	38,883	36,745	37,803	39,644	39,634
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	121,558	121,393	113,918	124,987	135,336
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	301,428	301,514	263,308	235,401	230,405
Wisconsin	0	0	0	0	0
Wyoming	32,188	33,065	29,787	32,963	32,375
Total	1,548,664	1,853,[illegible]	1,954,[illegible]06	2,068,248	1,916,781

a/ Includes 30,151 M cubic feet of artificial gas.
b/ " 41,679 " " " " " "
c/ " 53,381 " " " " " "
d/ " 28,150 " " " " " "
e/ " 49,400 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for January, February, March, April, May, June, and July was 114,200,000, 113,400,000, 109,600,000, 108,000,000, 105,300,000, 108,100,000, and 105,500,000, respectively. The proportion produced by water power was as follows: 37.9, 37.7, 39.6, 40.4, 40.5, 37.2, and 37.5 per cent, respectively.

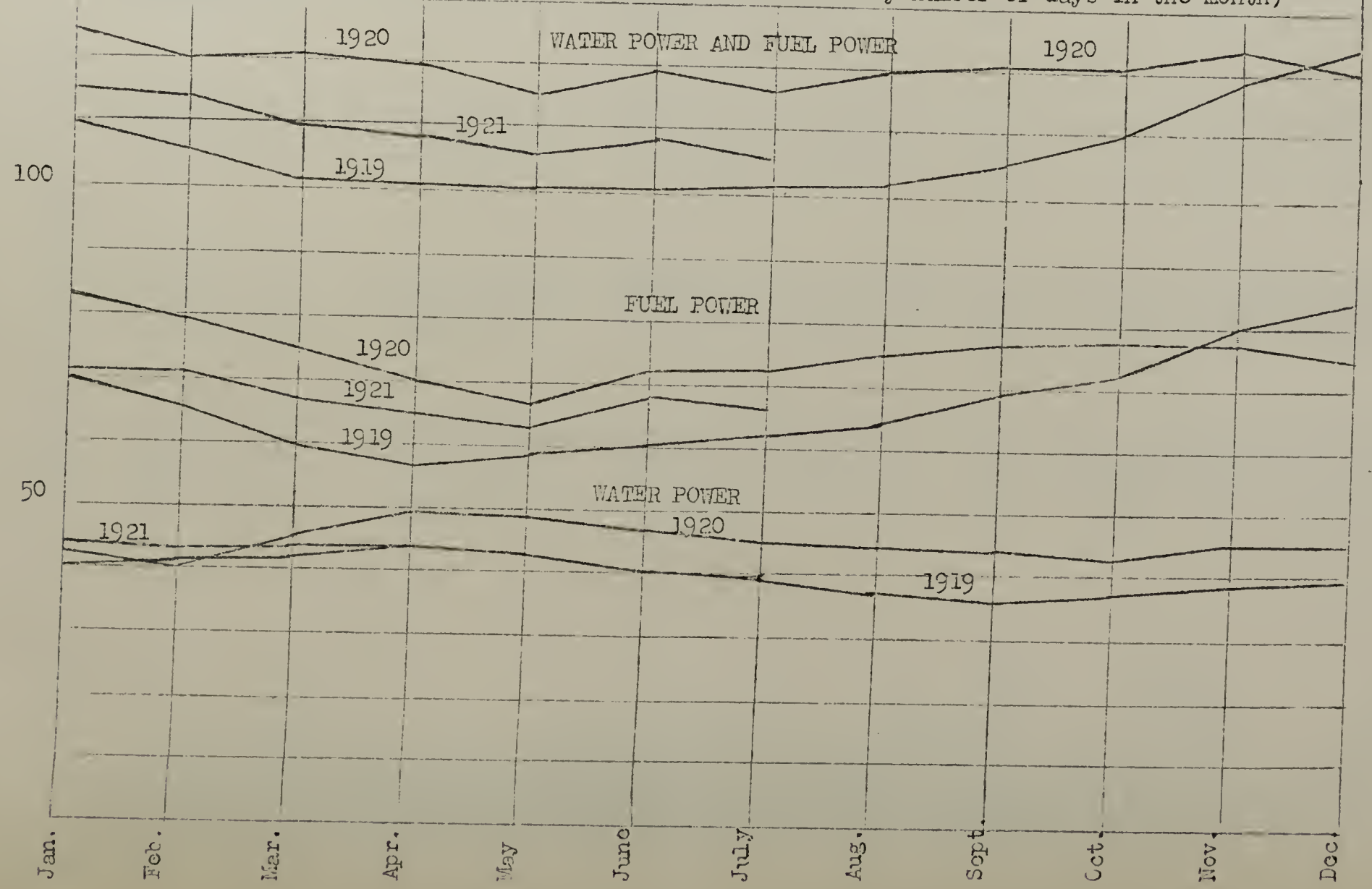
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — October 5, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR APRIL, MAY, JUNE, JULY, AND AUGUST, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921				
	April	May	June	July	August
Alabama	34,037	28,719	17,229	22,589	22,885
Arizona	6,064	6,810	9,867	10,081	6,949
Arkansas	94	60	122	132	154
California	278,212	298,727	308,058	314,220	294,157
Colorado	14,699	15,762	14,556	15,110	15,574
Connecticut	17,318	14,928	7,114	7,872	6,051
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	768	728	884	888	966
Georgia	36,632	38,678	38,689	38,545	40,970
Idaho	35,829	47,855	47,796	53,228	54,517
Illinois	15,383	15,663	15,132	14,767	15,685
Indiana	4,342	4,636	3,580	2,418	2,518
Iowa	53,554	54,363	48,352	49,686	49,118
Kansas	3,010	2,275	2,352	1,745	1,934
Kentucky	12	10	10	10	10
Louisiana	0	0	0	0	0
Maine	23,853	26,763	26,233	25,389	27,191
Maryland	254	378	257	248	231
Massachusetts	37,934	34,850	18,967	25,156	18,725
Michigan	64,351	60,560	52,239	49,857	51,458
Minnesota	44,134	43,484	40,885	36,594	34,190
Mississippi	0	0	0	0	0
Missouri	5,985	5,599	5,132	2,930	3,045
Montana	41,882	42,270	43,902	44,624	44,624
Nebraska	1,457	1,477	1,615	1,645	1,554
Nevada	2,556	3,081	3,342	3,523	3,655
New Hampshire	19,179	15,655	7,720	9,530	8,539
New Jersey	215	208	131	130	128
New Mexico	72	73	71	75	83
New York	169,815	166,498	151,332	157,208	161,627
North Carolina	22,783	24,282	24,795	23,907	24,388
North Dakota	0	0	0	0	0
Ohio	3,553	2,868	1,675	1,517	1,569
Oklahoma	176	265	72	221	215
Oregon	33,435	33,314	30,761	30,627	27,134
Pennsylvania	53,220	52,230	37,996	38,385	39,726
Rhode Island	602	822	301	584	386
South Carolina	54,987	59,428	59,782	58,934	58,989
South Dakota	1,662	1,589	1,111	744	851
Tennessee	32,421	33,851	25,763	25,477	27,999
Texas	301	372	360	364	408
Utah	12,532	7,754	7,834	8,288	7,308
Vermont	10,069	8,936	8,287	7,885	8,563
Virginia	20,423	21,708	14,525	13,846	12,202
Washington	94,275	88,536	90,102	92,824	95,643
West Virginia	2,252	2,562	1,848	1,629	1,289
Wisconsin	53,793	53,434	45,056	33,263	29,479
Wyoming	147	140	137	147	159
Total	1,303,272	1,322,201	1,215,972	1,226,842	1,202,846

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS 1921				
	April	May	June	July	August
Alabama	3,881	8,614	20,269	15,182	17,214
Arizona	3,988	3,700	3,813	3,135	3,070
Arkansas	9,350	8,984	10,296	10,217	10,766
California	54,560	43,207	47,516	60,773	80,930
Colorado	14,304	13,548	11,533	13,901	15,641
Connecticut	31,110	33,445	42,614	40,438	44,960
Delaware	5,440	5,394	5,404	5,527	5,582
District of Columbia	21,532	21,960	21,342	21,318	21,444
Florida	10,898	10,598	10,308	10,327	10,173
Georgia	6,181	6,444	7,137	6,940	7,082
Idaho	221	402	226	395	337
Illinois	212,762	211,109	212,917	216,023	228,848
Indiana	66,991	65,767	67,373	67,313	71,672
Iowa	28,000	27,677	27,349	28,240	30,397
Kansas	25,997	28,461	29,138	32,709	35,233
Kentucky	21,749	22,247	22,418	22,834	23,740
Louisiana	18,771	19,244	19,732	19,523	20,147
Maine	247	229	378	513	795
Maryland	10,709	12,991	22,713	22,098	24,877
Massachusetts	85,710	92,005	101,407	94,660	107,761
Michigan	91,918	94,465	102,608	105,847	110,556
Minnesota	8,628	11,046	12,642	21,450	29,164
Mississippi	4,914	4,912	4,983	4,987	5,089
Missouri	50,797	53,006	55,647	53,452	56,903
Montana	556	566	563	614	614
Nebraska	18,875	19,254	19,991	20,738	22,005
Nevada	32	25	25	29	28
New Hampshire	1,706	1,882	3,068	2,516	2,729
New Jersey	73,330	72,200	72,784	72,980	76,720
New Mexico	1,184	1,211	1,159	1,192	1,250
New York	306,612	302,502	309,838	313,880	326,703
North Carolina	3,168	3,149	3,343	3,690	3,813
North Dakota	2,056	2,033	2,174	2,487	2,966
Ohio	201,377	195,320	196,664	192,629	204,361
Oklahoma	16,053	15,829	17,200	17,214	17,577
Oregon	4,220	3,449	4,642	5,434	10,346
Pennsylvania	281,740	274,352	271,079	263,398	279,726
Rhode Island	17,855	19,155	31,320	26,036	34,002
South Carolina	4,684	3,341	3,874	3,597	3,851
South Dakota	2,232	2,326	2,279	3,477	3,534
Tennessee	9,930	9,792	10,059	10,248	10,281
Texas	57,031	59,994	61,139	63,972	66,665
Utah	0	0	0	0	0
Vermont	19	3	261	480	439
Virginia	21,232	22,650	29,096	30,996	32,889
Washington	2,282	2,177	2,148	1,936	3,029
West Virginia	85,624	97,289	92,281	88,589	87,369
Wisconsin	28,094	29,791	30,088	36,484	45,491
Wyoming	2,769	2,722	2,683	2,676	2,821
Total	1,931,199	1,941,565	2,028,121	2,043,695	2,201,490
Total by water power	1,308,272	1,322,201	1,215,972	1,226,842	1,202,846
Total by water power and fuels	3,239,471	3,263,766	3,244,093	3,270,537	3,404,336

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during August, 1921, are as follows: Arkansas, 466,000; Florida, 369,000; Georgia, 650,000; Louisiana, 96,000; Mississippi, 633,000; Oregon, 10,169,000; Washington, 792,000; Wisconsin, 247,000; and all other States (Alabama, Arizona, California, Idaho, Maine, Michigan, Minnesota, New Mexico, Oklahoma, South Carolina, and Texas), 1,812,000.

State	Fuel oil - barrels				
	1941				
	April	May	June	July	August
Alabama	9,192	8,283	8,293	8,843	6,368
Arizona	22,437	17,009	18,496	14,984	13,552
Arkansas	3,665	1,628	7,273	20,374	19,269
California	247,067	214,074	207,795	252,308	305,852
Colorado	0	0	0	0	0
Connecticut	993	1,929	3,196	2,734	3,733
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	55,495	55,879	50,736	48,913	48,626
Georgia	20,082	24,310	22,742	22,416	24,118
Idaho	0	0	0	0	0
Illinois	217	160	188	184	198
Indiana	294	316	302	315	394
Iowa	910	956	867	914	890
Kansas	70,595	76,718	82,904	103,014	108,212
Kentucky	297	290	340	353	370
Louisiana	46,652	46,495	41,602	42,833	44,297
Maine	1,327	1,263	2,095	2,250	2,207
Maryland	0	0	0	23	25
Massachusetts	23,039	25,848	25,990	24,001	30,794
Michigan	162	128	207	197	140
Minnesota	222	279	303	371	840
Mississippi	9,006	10,786	10,656	10,455	11,149
Missouri	7,289	8,075	24,615	31,600	34,257
Montana	192	183	180	175	254
Nebraska	4,833	7,464	6,859	8,445	11,033
Nevada	0	63	28	43	0
New Hampshire	0	0	0	0	0
New Jersey	96	102	90	98	77
New Mexico	625	1,096	1,546	1,906	2,234
New York	4,906	5,620	7,896	9,412	12,016
North Carolina	190	140	146	118	120
North Dakota	125	83	94	115	149
Ohio	591	580	588	587	596
Oklahoma	34,869	35,216	44,789	70,527	58,958
Oregon	4,352	1,958	1,208	563	1,186
Pennsylvania	100	79	365	361	90
Rhode Island	43,763	53,941	91,391	76,123	101,569
South Carolina	35	35	0	0	0
South Dakota	1,656	1,747	1,876	1,825	1,801
Tennessee	0	0	0	0	0
Texas	222,699	245,192	246,221	260,988	282,774
Utah	0	0	0	0	0
Vermont	0	0	1,100	2,029	3,300
Virginia	0	0	0	0	0
Washington	3,573	3,640	3,480	4,326	11,161
West Virginia	0	0	0	0	0
Wisconsin	228	299	307	271	281
Wyoming	1,419	1,655	1,324	1,312	1,327
Total	843,193	853,319	917,088	1,026,306	1,144,217

State	Natural gas - thousands of cubic feet. 1921				
	April	May	June	July	August
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	173,663	182,372	197,015	145,095	152,014
California	222,894	208,662	288,592	366,115	442,680
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	92,178	173,382	193,696	229,553	245,480
Kentucky	13,498	13,431	13,973	13,423	30,233
Louisiana	104,145	89,998	94,677	99,923	105,700
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	4,692
Montana	998	1,036	1,039	1,127	1,132
Nebraska	0	0	0		0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	8,238	5,699	6,764	6,481	6,599
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	353,462a/	451,332b/	393,953c/	331,723d/	526,771e/
Oklahoma	389,400	420,808	442,954	294,834	327,005
Oregon	0	0	0	0	0
Pennsylvania	36,745	37,803	39,644	39,634	73,284f/
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	121,393	113,918	124,987	135,336	140,984
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	301,514	263,308	235,401	230,405	243,387
Wisconsin	0	0	0	0	0
Wyoming	33,065	29,787	32,963	32,375	32,875
Total	1,853,783	1,994,126	2,068,248	1,928,614	2,335,226

a/ Includes 41,679 M cubic feet of artificial gas.
b/ " 53,381 " " " " " "
c/ " 28,150 " " " " " "
d/ " 49,400 " " " " " "
e/ " 89,003 " " " " " "
f/ " 32,674 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for each month from January to August, inclusive, was as follows: 114,200,000, 113,400,000, 109,600,000, 108,000,000, 105,300,000, 108,100,000, 105,500,000, and 109,800,000, respectively. The proportion produced by water power was as follows: 37.9, 37.7, 39.6, 40.4, 40.5, 37.4, 37.5, and 35.3 per cent, respectively.

An examination of the curves of mean daily production of electricity on page 7 shows a remarkable parallelism between the curves of total output for 1920 and 1921 for the period from March to August. As the curves for 1919 are based on interpolated values of production for some of the months, it is not possible to ascertain if the parallelism between 1920 and 1921 also occurred for the same period in 1919. The parallelism between these two curves in 1920 and 1921 indicates that conditions governing the fluctuations in the demand for power of public utilities were the same for the two periods even though there has been a marked decrease in the production of electricity by public utilities in 1921 as compared with 1920. It also apparently shows that the decrease in the demand for power occurred the latter part of 1920 and the first two months of 1921; since that period the variations in the demand for power have been the normal seasonal variations as has been pointed out in previous reports.

The curve of output by water power reflects the general low-water conditions prevalent in the East, the percentage of total output produced by water power having decreased to 35.3. Unless general rains occur in the eastern section of the country the output of electricity by water power will be abnormally low during the fall months, and as the decrease in the output of electricity by water power is taken care of by fuel-produced power there will probably be a more than normal seasonal increase in the fuel consumption by public-utility plants this fall.

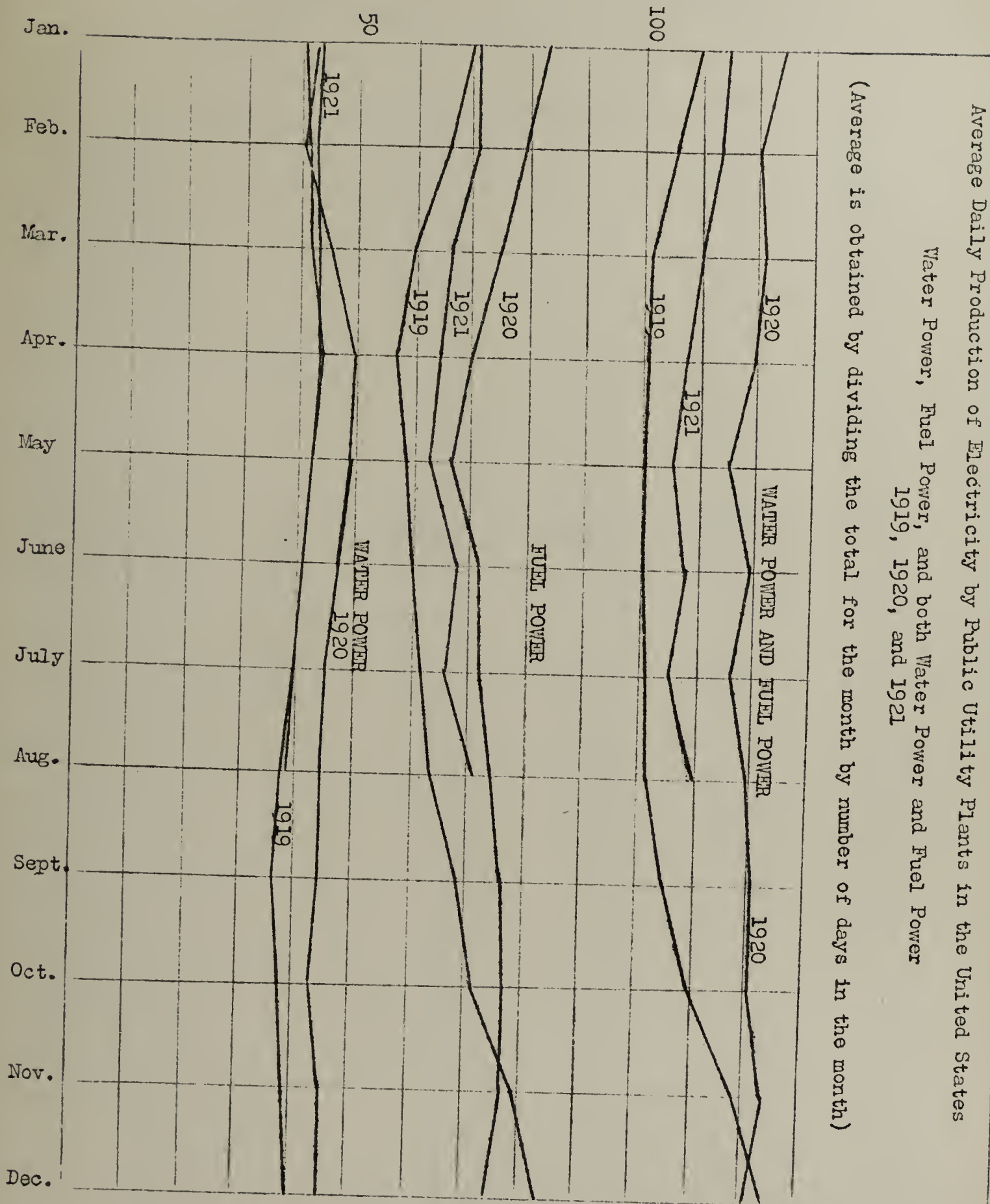
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR.
UNITED STATES GEOLOGICAL SURVEY

Office of the Director October 26, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR MAY, JUNE, JULY, AUGUST, AND SEPTEMBER, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921				
	May	June	July	August	September
Alabama	28,719	17,229	22,589	22,885	13,621
Arizona	8,810	9,867	10,081	6,949	7,855
Arkansas	60	122	132	154	142
California	298,727	308,058	314,220	294,912	269,537
Colorado	15,762	14,556	15,110	15,574	14,957
Connecticut	14,928	7,114	7,872	6,051	4,157
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	728	884	888	966	830
Georgia	38,678	38,689	38,545	40,970	36,295
Idaho	47,855	47,796	53,228	54,583	47,054
Illinois	15,663	15,132	14,767	15,685	15,406
Indiana	4,636	3,580	2,418	2,518	2,653
Iowa	54,363	48,352	49,686	49,120	54,234
Kansas	2,275	2,352	1,745	1,934	1,829
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	26,763	26,233	25,389	26,880	24,392
Maryland	378	257	248	233	233
Massachusetts	34,850	18,967	25,156	18,645	10,375
Michigan	60,560	52,239	49,854	51,458	52,132
Minnesota	43,484	40,885	34,513	28,155	29,239
Mississippi	0	0	0	0	0
Missouri	5,599	5,132	2,930	3,045	857
Montana	42,270	43,902	44,624	45,086	45,370
Nebraska	1,477	1,615	1,645	1,565	1,570
Nevada	3,081	3,342	3,529	3,655	3,697
New Hampshire	15,655	7,720	9,553	8,555	5,149
New Jersey	208	131	130	128	123
New Mexico	73	71	75	83	69
New York	166,498	151,332	157,235	161,781	154,009
North Carolina	24,282	24,795	23,907	24,394	22,489
North Dakota	0	0	0	0	0
Ohio	2,868	1,675	1,517	1,569	1,363
Oklahoma	265	72	221	215	203
Oregon	33,314	30,761	30,627	27,286	26,181
Pennsylvania	52,230	37,996	38,385	39,726	31,043
Rhode Island	822	301	584	386	282
South Carolina	59,428	59,782	58,933	63,787	62,502
South Dakota	1,589	1,111	744	851	898
Tennessee	33,851	25,763	25,477	28,123	28,080
Texas	372	360	364	408	409
Utah	7,754	7,834	8,288	7,308	7,223
Vermont	8,936	8,287	7,885	8,548	7,202
Virginia	21,708	14,525	13,846	9,247	8,996
Washington	88,536	90,102	92,824	95,693	90,271
West Virginia	2,562	1,848	1,629	1,289	1,191
Wisconsin	53,434	45,056	33,263	29,431	34,132
Wyoming	140	137	147	159	147
Total	1,322,201	1,215,972	1,224,813	1,200,000	1,118,407

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1921				
	May	June	July	August	September
Alabama	8,614	20,269	15,182	17,214	24,365
Arizona	3,700	3,813	3,116	3,049	2,972
Arkansas	8,984	10,296	10,811	10,797	10,995
California	43,807	47,516	60,776	81,205	83,077
Colorado	13,548	11,533	13,911	15,492	15,378
Connecticut	33,443	42,614	40,438	44,960	47,780
Delaware	5,394	5,404	5,527	5,582	5,690
District of Columbia	21,960	21,342	21,318	21,444	21,922
Florida	10,598	10,208	10,325	10,161	10,389
Georgia	6,444	7,137	6,940	7,182	9,566
Idaho	402	226	395	354	522
Illinois	211,109	212,917	216,026	228,827	227,877
Indiana	65,767	67,373	67,301	72,506	73,141
Iowa	27,677	27,349	28,240	30,417	31,095
Kansas	28,431	29,138	32,833	35,388	37,473
Kentucky	22,247	22,418	22,830	23,729	23,834
Louisiana	19,244	19,732	19,578	20,220	20,037
Maine	229	378	513	795	3,279
Maryland	12,991	22,713	22,098	24,877	24,877
Massachusetts	92,005	101,407	94,660	107,782	119,296
Michigan	94,465	102,608	105,847	110,586	109,285
Minnesota	11,046	12,642	23,368	34,930	33,037
Mississippi	4,912	4,983	4,987	5,089	5,387
Missouri	53,006	55,647	53,409	56,836	57,407
Montana	566	563	614	617	642
Nebraska	19,254	19,991	20,738	22,005	22,039
Nevada	25	25	29	28	25
New Hampshire	1,882	3,068	2,516	2,729	3,631
New Jersey	72,200	72,784	72,980	76,720	76,742
New Mexico	1,211	1,159	1,192	1,250	1,290
New York	302,502	309,838	313,885	327,532	334,655
North Carolina	3,149	3,343	3,690	3,774	4,414
North Dakota	2,033	2,174	2,485	2,964	2,696
Ohio	195,820	196,664	192,624	204,421	205,060
Oklahoma	15,829	17,200	17,214	17,562	17,558
Oregon	3,449	4,642	5,434	10,441	11,670
Pennsylvania	274,352	271,079	263,394	279,743	284,842
Rhode Island	19,155	31,320	26,036	34,002	36,526
South Carolina	3,341	3,874	3,597	3,954	5,194
South Dakota	2,326	2,979	3,477	3,532	3,546
Tennessee	9,792	10,059	10,248	10,281	10,775
Texas	59,994	61,139	63,971	66,574	66,377
Utah	0	0	0	0	
Vermont	3	261	480	439	1,799
Virginia	22,650	29,096	30,996	35,867	35,612
Washington	2,177	2,148	1,936	3,105	4,142
West Virginia	97,289	92,281	87,771	84,656	85,731
Wisconsin	29,791	30,088	36,484	45,491	42,692
Wyoming	2,722	2,683	2,676	2,800	2,748
Total	1,941,565	2,028,121	2,044,896	2,209,909	2,259,087
Total by water power	1,322,201	1,215,972	1,224,813	1,200,000	1,118,407
Total by water power and fuels	3,263,766	3,244,093	3,269,709	3,409,909	3,377,494

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during September, 1921, are as follows: Alabama, 34,000; Arkansas, 471,000; Florida, 349,000; Georgia, 682,000; Idaho, 522,000; Louisiana, 92,000; Michigan, 59,000; Minnesota, 346,000; Mississippi, 861,000; Oregon, 11,461,000; South Carolina, 63,000; Washington, 643,000; Wisconsin, 139,000; and all other States (Arizona, California, Maine, New Mexico, Oklahoma, and Texas), 893,000.

Electric power produced during May, June, July, August, and September, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	May	June	July	August	September
Alabama	13,335	27,798	21,113	23,337	30,852
Arizona	150	0	0	0	0
Arkansas	11,344	9,829	10,435	9,563	9,584
California	0	0	0	0	0
Colorado	26,654	22,587	28,068	29,044	28,271
Connecticut	48,582	56,829	55,155	60,095	62,016
Delaware	6,657	6,173	6,238	6,577	6,934
District of Columbia	18,768	18,067	18,948	19,120	18,547
Florida	2,003	1,306	1,842	1,748	1,826
Georgia	5,943	7,325	7,031	6,020	11,420
Idaho	0	0	0	0	0
Illinois	304,535	302,094	306,715	326,595	319,004
Indiana	144,864	142,337	144,296	152,245	151,094
Iowa	64,381	62,420	63,774	67,045	69,031
Kansas	21,441	20,329	18,221	17,322	15,878
Kentucky	38,438	38,512	38,457	38,842	38,664
Louisiana	9,338	9,818	10,178	10,431	10,401
Maine	198	233	318	779	1,809
Maryland	18,210	27,789	26,112	26,958	26,958
Massachusetts	93,453	104,135	99,257	107,921	119,222
Michigan	106,917	114,379	118,915	123,661	120,448
Minnesota	23,914	23,834	35,115	47,143	41,177
Mississippi	9,312	9,762	9,730	8,475	9,304
Missouri	87,260	84,327	79,239	82,324	82,095
Montana	3,556	3,500	3,787	3,476	3,600
Nebraska	31,808	33,455	35,422	35,606	35,079
Nevada	117	127	130	153	138
New Hampshire	2,682	4,146	3,100	3,473	4,808
New Jersey	92,715	89,786	97,273	93,288	92,929
New Mexico	2,406	2,186	2,123	2,678	3,363
New York	338,960	332,044	345,512	365,900	374,970
North Carolina	6,827	7,214	8,722	7,845	9,040
North Dakota	12,099	11,792	15,034	14,156	12,852
Ohio	244,065	249,298	250,780	249,812	237,699
Oklahoma	3,968	3,743	3,329	3,474	3,345
Oregon	65	0	0	0	140
Pennsylvania	384,664	367,976	344,822	365,275	371,186
Rhode Island	9,607	8,323	8,447	7,870	8,513
South Carolina	6,581	7,545	7,768	8,044	10,550
South Dakota	5,542	6,413	7,373	7,518	6,979
Tennessee	18,234	19,745	18,884	20,263	20,270
Texas	18,458	18,426	19,314	19,240	17,728
Utah	0	0	0	0	0
Vermont	14	216	580	336	1,815
Virginia	32,111	36,764	40,535	48,315	48,822
Washington	2,542	2,199	2,180	2,287	2,339
West Virginia	89,425	89,217	85,576	79,579	83,445
Wisconsin	46,334	43,103	49,574	60,978	58,084
Wyoming	6,732	6,398	6,523	6,902	6,868
Total	2,415,009	2,434,349	2,453,945	2,571,718	2,589,037

State	Fuel oil - barrels				
	1921				
	May	June	July	August	September
Alabama	8,283	6,293	8,843	6,368	5,453
Arizona	17,009	18,496	14,823	13,386	12,516
Arkansas	1,628	7,273	20,374	20,353	20,533
California	214,074	207,795	252,308	307,097	316,754
Colorado	0	0	0	0	0
Connecticut	1,929	3,196	2,734	2,903	2,971
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	55,879	50,736	48,836	48,626	51,122
Georgia	24,310	22,742	22,416	24,118	21,088
Idaho	0	0	0	0	0
Illinois	160	188	184	198	181
Indiana	316	302	315	394	587
Iowa	956	867	914	890	924
Kansas	76,718	82,904	103,014	112,310	117,526
Kentucky	290	340	353	370	360
Louisiana	46,495	41,602	43,333	44,809	43,978
Maine	1,263	2,095	2,250	2,207	8,920
Maryland	0	0	23	20	20
Massachusetts	25,848	25,990	24,001	30,794	29,792
Michigan	128	207	197	140	136
Minnesota	279	303	371	840	470
Mississippi	10,786	10,656	10,455	11,149	11,100
Missouri	8,075	24,615	31,600	34,257	35,357
Montana	133	180	175	268	265
Nebraska	7,464	6,859	8,445	11,033	11,017
Nevada	63	28	43	0	0
New Hampshire	0	0	0	0	0
New Jersey	102	90	98	77	115
New Mexico	1,096	1,546	1,906	2,234	2,055
New York	5,620	7,896	9,412	12,043	10,629
North Carolina	140	146	118	120	100
North Dakota	83	94	115	149	139
Ohio	580	588	587	596	596
Oklahoma	35,216	44,789	70,527	58,524	56,167
Oregon	1,958	1,208	563	1,186	1,185
Pennsylvania	79	365	361	90	288
Rhode Island	53,941	91,391	76,123	101,569	109,976
South Carolina	35	0	0	0	0
South Dakota	1,747	1,876	1,825	1,791	1,842
Tennessee	0	0	0	0	0
Texas	245,192	246,221	260,988	282,779	278,444
Utah	0	0	0	0	0
Vermont	0	1,100	2,029	3,300	7,409
Virginia	0	0	0	0	0
Washington	3,640	3,480	4,326	11,161	17,923
West Virginia	0	0	0	0	0
Wisconsin	299	307	271	281	2,063
Wyoming	1,655	1,324	1,312	1,327	346
Total	853,519	916,088	1,026,568	1,149,757	1,180,347

State	Natural gas - thousands of cubic feet				
			1921		
	May	June	July	August	September
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	182,372	197,015	145,095	153,570	150,686
California	208,662	288,592	366,115	442,680	395,063
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	173,382	193,696	229,553	245,162	254,863
Kentucky	13,431	13,973	13,423	30,233	21,300
Louisiana	89,998	94,677	99,923	105,700	106,075
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	534	4,692	1,653
Montana	1,036	1,039	1,127	1,132	1,186
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	5,699	6,764	6,481	6,399	6,740
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	451,332a/	393,953b/	331,723c/	526,731d/	578,861e/
Oklahoma	420,808	442,954	294,834	326,905	325,133
Oregon	0	0	0	0	0
Pennsylvania	37,803	39,644	39,634	73,284f/	135,675g/
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	113,918	124,987	135,336	140,864	126,948
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	263,308	235,401	230,405	243,387	251,886
Wisconsin	0	0	0	0	0
Wyoming	29,787	32,963	32,375	32,875	30,234
Total	1,994,126	2,068,248	1,929,148	2,336,204	2,388,893

a/ Includes 53,381 M cubic feet of artificial gas.
b/ " 28,150 " " " " " "
c/ " 49,400 " " " " " "
d/ " 89,003 " " " " " "
e/ " 101,401 " " " " " "
f/ " 132,674 " " " " " "
g/ " 93,744 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants of 100-kilowatt capacity, or more, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

The mean daily output in kilowatt-hours for each month from January to September, inclusive, was as follows: 114,200,000, 113,400,000, 109,600,000, 108,000,000, 105,300,000, 108,100,000, 105,500,000, 110,000,000, and 112,600,000, respectively. The proportion produced by water power was as follows: 37.9, 37.7, 39.6, 40.4, 40.5, 37.4, 37.5, 35.2, and 33.1 per cent, respectively.

An examination of the curves of mean daily production of electricity on page 7 shows that the parallelism between the curves of total output for 1920 and 1921 discussed in last month's report continued during the month of September.

The output of electricity by water power continued to decrease, the output for September, 1921, being but 2 per cent greater than the output by water power for September, 1919, which was the minimum month of the three years of record. Precipitation conditions during October indicate that the output by water power for October will be smaller than for September and if general rains do not occur in November, the output of electricity by water power for that month will undoubtedly be lower than any month since starting the publication of these reports.

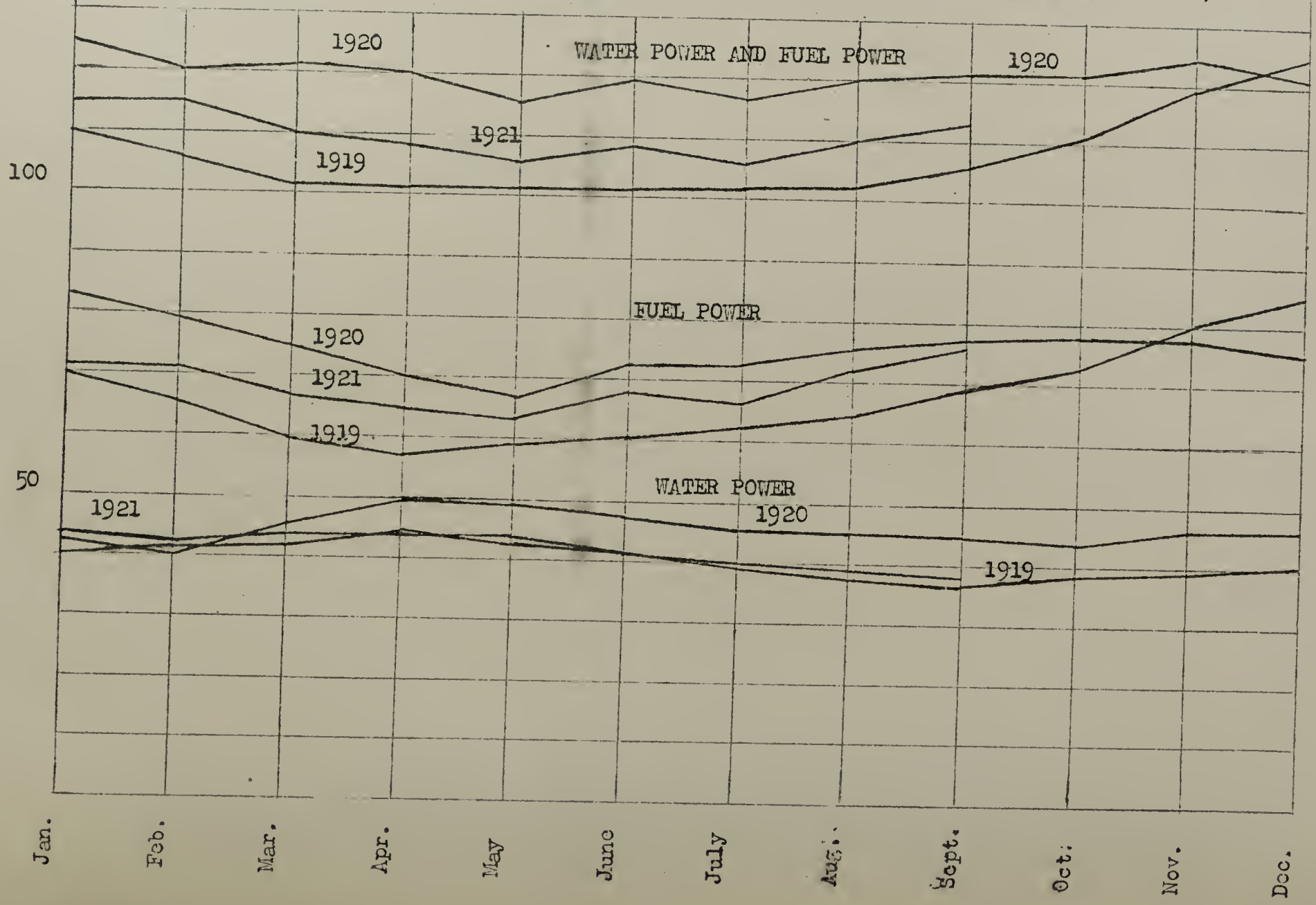
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

November 30, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR JUNE, JULY, AUGUST, SEPTEMBER, AND OCTOBER, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER				
	1921				
	June	July	August	September	October
Alabama	17,229	22,589	22,885	13,621	15,485
Arizona	9,867	10,081	6,949	7,855	8,759
Arkansas	122	132	154	142	133
California	308,058	314,220	294,912	263,159	254,001
Colorado	14,556	15,110	15,574	15,158	10,718
Connecticut	7,114	7,872	6,051	3,593	3,958
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	884	888	966	830	634
Georgia	38,689	38,545	40,970	37,231	37,636
Idaho	47,796	53,228	54,583	44,761	44,525
Illinois	15,132	14,767	15,685	15,492	16,054
Indiana	3,580	2,418	2,518	2,983	2,950
Iowa	48,352	49,686	49,130	54,328	54,925
Kansas	2,352	1,745	1,934	1,829	1,132
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	26,233	25,389	26,880	23,919	27,009
Maryland	257	248	233	129	104
Massachusetts	18,967	25,156	17,645	10,375	14,273
Michigan	52,339	49,854	51,455	51,952	58,235
Minnesota	40,885	34,513	28,155	29,228	30,072
Mississippi	0	0	0	0	0
Missouri	5,132	2,930	3,045	857	377
Montana	43,902	44,624	45,086	45,377	47,675
Nebraska	1,615	1,645	1,565	1,570	1,423
Nevada	3,342	3,529	3,655	2,972	3,181
New Hampshire	7,720	9,553	8,555	5,205	5,662
New Jersey	131	130	128	107	89
New Mexico	71	75	83	69	66
New York	151,332	157,235	161,781	154,291	179,813
North Carolina	24,795	23,907	27,957	24,645	22,859
North Dakota	0	0	0	0	0
Ohio	1,675	1,517	1,569	1,462	1,646
Oklahoma	72	221	215	203	120
Oregon	30,761	30,627	27,281	26,013	27,596
Pennsylvania	37,996	38,385	39,726	31,035	33,132
Rhode Island	301	534	386	282	121
South Carolina	59,782	58,933	60,227	56,779	57,208
South Dakota	1,111	744	851	898	814
Tennessee	25,763	25,477	28,123	28,150	27,557
Texas	360	364	433	307	237
Utah	7,834	8,288	7,308	6,312	6,377
Vermont	8,287	7,885	8,548	7,223	7,986
Virginia	14,525	13,846	9,247	6,520	5,230
Washington	90,102	92,824	95,693	89,207	95,833
West Virginia	1,848	1,629	1,389	1,393	817
Wisconsin	45,056	33,263	29,406	33,163	32,495
Wyoming	137	147	159	147	158
Total	1,215,972	1,234,813	1,199,995	1,100,782	1,139,090

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS				
			1921		
	June	July	August	September	October
Alabama	20,269	15,182	17,239	25,072	23,854
Arizona	3,813	3,116	3,049	3,040	2,937
Arkansas	10,296	10,811	10,797	10,437	11,099
California	47,516	60,776	81,205	80,086	74,772
Colorado	11,533	13,911	15,480	15,361	21,019
Connecticut	42,614	40,438	44,960	48,938	52,556
Delaware	5,404	5,527	5,582	5,690	6,348
District of Columbia	21,342	21,318	21,444	21,922	21,838
Florida	10,208	10,325	10,161	10,399	11,150
Georgia	7,137	6,940	7,182	9,499	11,690
Idaho	226	395	354	518	129
Illinois	212,917	216,026	228,859	227,345	245,031
Indiana	67,373	67,301	72,515	72,705	76,231
Iowa	27,349	28,240	30,417	31,078	32,061
Kansas	29,138	32,833	35,382	37,523	38,609
Kentucky	22,418	22,830	23,729	23,852	25,542
Louisiana	19,732	19,573	20,220	20,041	19,686
Maine	378	513	795	3,734	4,107
Maryland	22,713	22,098	24,877	29,630	31,514
Massachusetts	101,407	94,660	107,782	118,961	128,550
Michigan	102,608	105,847	110,519	108,883	112,716
Minnesota	12,642	23,368	35,607	34,142	38,785
Mississippi	4,983	4,987	5,089	5,221	5,433
Missouri	55,647	53,409	56,844	57,417	63,033
Montana	563	614	617	643	687
Nebraska	19,991	20,738	22,029	21,932	22,227
Nevada	25	29	28	25	25
New Hampshire	3,068	2,516	2,729	3,685	3,746
New Jersey	72,734	72,980	76,732	77,710	76,522
New Mexico	1,159	1,192	1,250	1,289	1,297
New York	309,838	313,885	327,476	334,412	359,788
North Carolina	3,343	3,690	3,848	8,246	9,086
North Dakota	2,174	2,485	2,982	2,718	2,916
Ohio	196,664	192,624	204,421	203,838	206,183
Oklahoma	17,200	17,214	17,569	17,746	18,372
Oregon	4,642	5,434	10,459	12,688	14,276
Pennsylvania	271,079	263,394	279,743	285,128	302,734
Rhode Island	31,320	26,036	34,002	36,493	43,261
South Carolina	3,874	3,597	3,877	5,089	5,578
South Dakota	2,979	3,477	3,532	3,601	3,743
Tennessee	10,059	10,248	10,281	10,792	12,091
Texas	61,139	63,971	66,739	66,546	66,667
Utah	0	0	0	0	0
Vermont	261	480	439	1,799	566
Virginia	29,096	30,996	35,867	37,562	40,974
Washington	2,148	1,936	3,105	4,302	5,143
West Virginia	92,281	87,771	84,650	85,942	97,842
Wisconsin	30,088	36,484	45,433	41,535	46,562
Wyoming	2,683	2,676	2,810	2,900	3,093
Total	2,028,121	2,044,896	2,210,706	2,268,415	2,402,039
Total by water power	1,215,972	1,224,813	1,199,995	1,100,782	1,139,090
Total by water power and fuels	3,244,093	3,269,709	3,410,701	3,369,197	3,541,159

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during October, 1921, are as follows: Alabama, 37,000; Arkansas, 321,000; Florida, 378,000; Georgia, 637,000; Louisiana, 97,000; Michigan, 66,000; Minnesota, 417,000; Mississippi, 878,000; Oregon, 14,146,000; South Carolina, 71,000; Washington, 1,189,000; and all other States (Arizona, California, Idaho, Maine, New Mexico, Oklahoma, and Texas), 1,257,000.

Electric power produced during June, July, August, September, and October, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	June	July	August	September	October
Alabama	27,798	21,113	23,462	31,357	28,053
Arizona	0	0	0	0	0
Arkansas	9,829	10,435	9,568	9,356	9,446
California	0	0	0	0	0
Colorado	22,587	28,068	28,974	28,254	35,955
Connecticut	56,829	55,155	60,095	62,974	67,134
Delaware	6,173	6,238	6,577	6,924	7,578
District of Columbia	18,067	18,948	19,130	18,547	19,163
Florida	1,806	1,842	1,748	1,826	1,898
Georgia	7,325	7,031	6,020	11,222	15,433
Idaho	0	0	0	0	0
Illinois	302,094	306,715	326,548	318,630	335,271
Indiana	142,337	144,296	152,095	151,673	158,960
Iowa	62,420	63,774	67,045	68,674	71,613
Kansas	20,329	18,221	17,322	15,847	19,250
Kentucky	38,512	36,457	38,842	38,709	41,224
Louisiana	9,818	10,178	10,431	10,401	9,844
Maine	233	318	779	2,565	3,192
Maryland	27,789	26,112	26,958	30,788	32,194
Massachusetts	104,135	99,257	107,921	118,801	120,756
Michigan	114,679	118,915	123,617	117,954	119,629
Minnesota	23,854	35,115	47,825	42,696	48,389
Mississippi	9,762	9,730	8,475	9,294	9,615
Missouri	84,327	79,239	82,288	81,251	86,310
Montana	3,500	3,787	3,476	3,650	3,610
Nebraska	33,455	35,422	36,038	35,936	35,915
Nevada	127	130	153	138	140
New Hampshire	4,146	3,100	3,473	4,983	5,200
New Jersey	89,786	97,273	93,356	93,302	92,139
New Mexico	2,186	2,123	2,678	3,359	2,796
New York	332,044	345,512	365,776	373,758	389,916
North Carolina	7,214	8,722	8,031	15,295	16,597
North Dakota	11,792	13,034	14,336	12,973	13,581
Ohio	249,298	250,780	249,812	235,397	249,608
Oklahoma	3,743	3,329	3,474	3,450	3,978
Oregon	0	0	0	140	135
Pennsylvania	367,976	344,822	365,275	358,707	387,626
Rhode Island	8,323	8,447	7,870	8,685	10,911
South Carolina	7,545	7,768	7,874	9,699	10,111
South Dakota	6,413	7,373	7,518	7,254	7,680
Tennessee	19,745	18,884	20,263	20,245	22,611
Texas	18,426	19,314	19,185	17,422	17,233
Utah	0	0	0	0	0
Vermont	216	580	336	1,815	711
Virginia	36,764	40,535	48,315	50,007	53,798
Washington	2,199	2,180	2,287	2,340	2,251
West Virginia	89,217	85,576	79,549	83,663	87,636
Wisconsin	43,103	49,574	60,803	54,255	58,164
Wyoming	6,398	6,523	6,981	7,274	7,572
Total	2,434,349	3,483,945	2,572,569	2,581,490	2,720,826

State	Fuel oil - barrels				
	1921				
	June	July	August	September	October
Alabama	6,293	8,843	6,368	7,816	7,789
Arizona	18,496	14,823	13,386	12,888	12,857
Arkansas	7,273	20,374	20,353	18,545	20,934
California	207,795	252,308	307,097	309,570	304,760
Colorado	0	0	0	0	0
Connecticut	3,196	2,734	2,903	2,971	4,085
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	50,736	48,836	48,626	50,795	53,372
Georgia	22,742	22,416	24,118	21,088	23,076
Idaho	0	0	0	0	0
Illinois	188	184	198	181	213
Indiana	302	315	394	587	427
Iowa	867	914	890	947	1,019
Kansas	82,904	103,014	112,270	118,358	114,260
Kentucky	340	353	370	360	538
Louisiana	41,602	43,333	44,809	43,990	41,452
Maine	2,095	2,250	2,207	8,920	9,114
Maryland	0	23	20	30	30
Massachusetts	25,990	24,001	30,794	29,792	31,041
Michigan	207	197	140	134	164
Minnesota	303	371	840	458	455
Mississippi	10,656	10,455	11,149	10,846	10,759
Missouri	24,615	31,600	34,257	35,357	37,323
Montana	180	175	268	284	316
Nebraska	6,859	8,445	11,057	11,049	11,891
Nevada	28	43	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	90	98	77	115	121
New Mexico	1,546	1,906	2,234	2,038	1,789
New York	7,896	9,412	12,043	10,322	11,499
North Carolina	146	118	120	100	115
North Dakota	94	115	149	143	143
Ohio	588	587	596	596	510
Oklahoma	44,789	70,587	58,524	57,179	54,561
Oregon	1,208	563	1,186	388	680
Pennsylvania	365	361	90	308	107
Rhode Island	91,391	76,123	101,569	109,976	118,057
South Carolina	0	0	0	0	0
South Dakota	1,876	1,825	1,791	2,089	2,021
Tennessee	0	0	0	0	0
Texas	246,221	260,988	282,973	280,897	277,509
Utah	0	0	0	0	0
Vermont	1,100	2,029	3,300	7,409	2,796
Virginia	0	0	0	0	0
Washington	3,480	4,326	11,161	17,923	17,198
West Virginia	0	0	0	0	0
Wisconsin	307	271	281	2,063	1,168
Wyoming	1,324	1,312	1,327	1,321	1,436
Total	,916,088	1,026,568	1,149,935	1,177,833	1,175,585

State	Natural gas - thousands of cubic feet				
	1921				
	June	July	August	September	October
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	197,015	145,095	153,570	151,595	166,522
California	288,592	366,115	442,680	395,063	345,256
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	193,696	229,553	245,162	259,406	256,976
Kentucky	13,973	13,423	30,233	21,300	11,009
Louisiana	94,677	99,923	105,700	106,075	104,688
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	534	4,692	1,653	0
Montana	1,039	1,127	1,132	1,186	1,236
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,764	6,481	6,399	6,805	6,844
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	393,953a/	331,723b/	526,731c/	578,863d/	521,546e/
Oklahoma	442,954	294,834	327,247	316,566	317,203
Oregon	0	0	0	0	0
Pennsylvania	39,644	39,634	73,284f/	135,318g/	128,380h/
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	124,987	135,336	133,927	122,933	125,600
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	235,401	230,405	243,387	251,889	279,054
Wisconsin	0	0	0	0	0
Wyoming	32,963	32,375	32,875	30,234	30,571
Total	2,068,248	1,929,148	2,329,609	2,331,476	2,297,475

a/ Includes 28,150 M cubic feet of artificial gas
b/ " 49,400 " " " " " "
c/ " 89,003 " " " " " "
d/ " 101,401 " " " " " "
e/ " 44,723 " " " " " "
f/ " 32,674 " " " " " "
g/ " 93,744 " " " " " "
h/ " 84,120 " " " " " "

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are now published within about 30 days after the end of the last month included in the report. It should be observed that the figures for the last month in the previous report -- September, in this instance -- are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most cases. The total output for September as published under date of October 26 was increased but one-fourth of one per cent as published in this report.

The mean daily output in kilowatt-hours by water power, steam power, and by both water and steam power for each month in 1921 is as follows:

	Water Power		Steam Power		Total
	Hp.	Per cent of total	Hp.	Per cent of total	Hp.
January	43,300,000	37.9	70,900,000	62.1	114,200,000
February	42,700,000	37.7	70,800,000	62.3	113,400,000
March	43,400,000	39.6	66,200,000	60.4	109,600,000
April	43,600,000	40.4	64,400,000	59.6	108,000,000
May	42,700,000	40.5	62,600,000	59.5	105,300,000
June	40,500,000	37.4	67,600,000	62.6	108,100,000
July	39,500,000	37.5	66,000,000	62.5	105,500,000
August	38,700,000	35.2	71,300,000	64.8	110,000,000
September	36,700,000	32.7	75,600,000	67.3	112,300,000
October	36,700,000	32.1	77,500,000	67.9	114,200,000

The mean daily output for each month in 1919, 1920, and 1921 is shown graphically on page 7. An examination of these curves indicates that the parallelism between the curves of total output for 1920 and 1921 which has been discussed in previous reports stopped in September, as the rate of production for October, 1921, shows a decided increase as compared with September, while the 1920 curve shows practically no increase in October as compared with September of the same year. This lack of parallelism after September probably indicates that the slackening up of industry began to affect the demand for electric power from public utilities in October, 1920. The increase in the demand for power in October apparently confirms the statements made in previous reports that there has been little or no change in the base load on public utilities since the first part of the year and the fluctuations in the demand for power as shown in the curve of total output for 1921 are due to seasonable changes in the use of power.

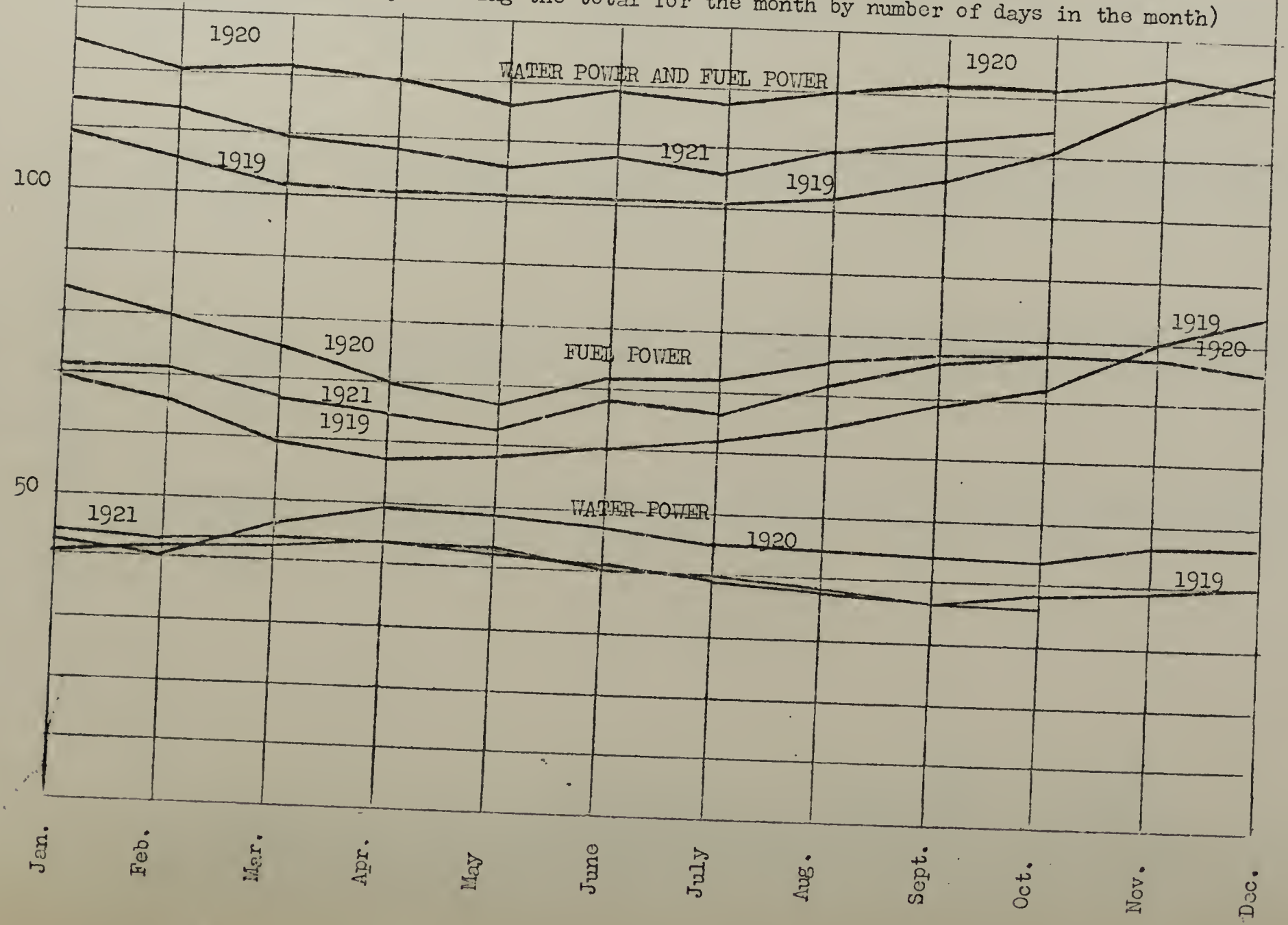
It is of interest to note that the output by fuel power for October of this year is the same as for October, 1920. The decrease in the total output for the month, as compared with October, 1920, was entirely in the output by water power. The percentage of the total output which was produced by water power in October, 1921, is the smallest for any month of the three years of record. This condition will probably be changed during November as low-water conditions have been relieved by precipitation during the month, especially the last few days of the month.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

Dec. 30, 1921.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR JULY, AUGUST, SEPTEMBER, OCTOBER, AND NOVEMBER, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER				
	July	August	1921 September	October	November
Alabama	22,589	22,885	13,621	15,485	23,863
Arizona	10,081	6,949	7,855	8,759	8,368
Arkansas	132	154	142	133	173
California	314,220	294,912	263,913	254,611	241,661
Colorado	15,110	15,574	15,158	10,718	9,267
Connecticut	7,872	6,051	3,593	3,958	7,181
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	888	966	830	634	907
Georgia	38,545	40,970	37,231	37,636	39,773
Idaho	53,228	54,583	44,761	41,784	42,265
Illinois	14,767	15,685	15,492	16,233	16,013
Indiana	2,418	2,518	2,983	2,967	2,940
Iowa	49,686	49,120	54,328	54,925	55,047
Kansas	1,745	1,934	1,829	1,103	1,041
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	25,389	26,880	23,930	27,681	31,307
Maryland	248	233	129	104	195
Massachusetts	25,156	18,645	10,375	14,044	24,746
Michigan	49,854	51,455	51,952	58,235	55,760
Minnesota	34,513	28,155	29,228	30,089	26,589
Mississippi	0	0	0	0	0
Missouri	2,930	3,045	857	377	1,400
Montana	44,624	45,086	45,377	46,044	48,683
Nebraska	1,645	1,565	1,570	1,423	1,174
Nevada	3,529	3,655	2,972	3,185	3,194
New Hampshire	9,553	8,555	5,205	5,669	12,797
New Jersey	130	128	107	89	138
New Mexico	75	83	69	66	74
New York	157,235	161,781	154,290	179,840	206,396
North Carolina	23,907	27,957	24,645	22,859	26,787
North Dakota	0	0	0	0	0
Ohio	1,517	1,569	1,462	1,646	3,438
Oklahoma	221	215	203	120	127
Oregon	30,627	27,281	26,013	27,267	29,806
Pennsylvania	38,385	39,726	31,035	33,132	47,650
Rhode Island	584	386	282	121	197
South Carolina	58,933	60,227	56,779	62,882	64,979
South Dakota	744	851	898	814	678
Tennessee	25,477	28,123	28,150	27,557	30,877
Texas	364	433	307	237	216
Utah	8,288	7,308	6,312	5,139	5,047
Vermont	7,885	8,548	7,153	8,010	8,932
Virginia	13,846	9,247	6,520	5,082	13,389
Washington	92,824	95,693	89,207	95,400	99,379
West Virginia	1,629	1,289	1,493	820	820
Wisconsin	33,263	29,406	33,163	32,761	29,549
Wyoming	147	159	147	158	154
Total	1,224,813	1,199,995	1,101,576	1,141,807	1,222,987

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1921 July	August	September	October	November
Alabama	15,182	17,239	25,072	23,842	19,352
Arizona	3,116	3,049	3,040	2,864	2,675
Arkansas	10,811	10,797	10,437	11,095	10,765
California	60,776	81,205	80,086	74,756	85,597
Colorado	13,911	15,480	15,361	21,013	21,792
Connecticut	40,438	44,960	43,938	52,619	51,242
Delaware	5,527	5,582	5,690	6,348	6,552
District of Columbia	21,318	21,444	21,922	21,838	22,716
Florida	10,325	10,161	10,380	11,298	11,925
Georgia	6,940	7,182	9,499	11,690	9,618
Idaho	395	354	518	339	131
Illinois	216,026	228,859	227,345	246,294	260,884
Indiana	67,301	72,515	72,720	77,392	79,859
Iowa	28,240	30,417	31,078	32,147	33,125
Kansas	32,833	35,382	37,523	38,756	37,879
Kentucky	22,830	23,729	23,855	25,545	25,398
Louisiana	19,578	20,220	20,041	19,685	19,684
Maine	513	795	4,174	4,766	2,602
Maryland	22,098	24,877	29,630	31,514	19,716
Massachusetts	94,660	107,782	118,961	128,877	122,873
Michigan	105,847	110,519	108,892	113,435	111,798
Minnesota	23,368	35,607	34,142	38,769	42,023
Mississippi	4,987	5,089	5,221	5,483	5,517
Missouri	53,409	56,844	57,417	62,992	63,019
Montana	614	617	643	687	668
Nebraska	20,738	22,029	21,932	22,299	21,583
Nevada	29	28	25	24	24
New Hampshire	2,516	2,729	3,685	3,746	3,215
New Jersey	72,980	76,732	77,710	85,730	89,346
New Mexico	1,192	1,250	1,284	1,290	1,289
New York	313,885	327,476	334,429	360,271	351,682
North Carolina	3,690	3,848	8,246	9,050	9,197
North Dakota	2,485	2,982	2,718	2,916	3,015
Ohio	192,624	204,421	203,850	221,169	224,591
Oklahoma	17,214	17,569	17,754	18,484	18,134
Oregon	5,434	10,459	12,688	14,670	13,353
Pennsylvania	263,394	279,743	289,618	306,810	310,741
Rhode Island	26,036	34,002	36,493	43,261	35,671
South Carolina	3,597	3,877	5,089	5,802	5,045
South Dakota	3,477	3,532	3,606	3,763	3,859
Tennessee	10,248	10,281	10,792	12,091	11,399
Texas	63,971	66,739	66,141	66,668	63,524
Utah	0	0	0	0	0
Vermont	480	439	1,799	566	29
Virginia	30,996	35,867	37,562	40,976	35,050
Washington	1,936	3,105	4,602	5,479	4,231
West Virginia	87,771	84,650	85,936	98,071	100,600
Wisconsin	36,484	45,433	41,623	46,654	46,985
Wyoming	2,676	2,810	2,960	3,245	3,348
Total	2,044,896	2,210,706	2,273,127	2,437,079	2,423,321
Total by water power	1,224,813	1,199,195	1,101,576	1,141,807	1,222,987
Total by water power and fuels	3,269,709	3,410,701	3,374,703	3,578,886	3,646,308

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during November, 1921, are as follows: Alabama, 36,000; Arkansas, 323,000; Florida, 406,000; Georgia, 762,000; Louisiana, 92,000; Michigan, 72,000; Minnesota, 427,000; Mississippi, 1,004,000; Oregon, 12,972,000; South Carolina, 76,000; Washington, 1,592,000; Wisconsin, 204,000; and all other States (Arizona, California, Idaho, Maine, New Mexico, Oklahoma and Texas) 1,251,000.

Electric power produced during July, August September, October, and November, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	July	August	September	October	November
Alabama	21,113	23,462	31,357	28,023	22,409
Arizona	0	0	0	0	0
Arkansas	10,435	9,568	9,356	9,446	9,440
California	0	0	0	0	0
Colorado	28,068	28,974	28,254	35,910	36,918
Connecticut	55,155	60,095	62,974	67,215	64,528
Delaware	6,238	6,577	6,924	7,578	7,845
District of Columbia	18,948	19,120	18,547	19,163	19,392
Florida	1,842	1,748	1,826	1,898	1,924
Georgia	7,031	6,020	11,222	15,433	12,165
Idaho	0	0	0	0	0
Illinois	306,715	326,548	318,630	335,655	359,507
Indiana	144,296	152,095	151,754	161,547	167,890
Iowa	63,774	67,045	68,674	71,792	77,959
Kansas	18,221	17,322	15,847	19,188	19,795
Kentucky	38,457	38,842	38,724	41,239	41,668
Louisiana	10,178	10,431	10,401	9,844	9,772
Maine	318	779	3,315	4,354	2,104
Maryland	26,112	26,958	30,788	32,194	20,556
Massachusetts	99,257	107,921	118,801	120,816	115,964
Michigan	118,915	123,617	118,009	120,040	117,425
Minnesota	35,115	47,825	42,696	48,429	54,394
Mississippi	9,730	8,475	9,294	9,615	9,262
Missouri	79,239	82,288	81,251	86,216	96,081
Montana	3,787	3,476	3,650	3,610	3,707
Nebraska	35,422	36,038	35,936	36,039	35,800
Nevada	130	153	138	134	135
New Hampshire	3,100	3,473	4,983	5,200	4,367
New Jersey	97,273	93,356	93,302	100,344	108,425
New Mexico	2,123	2,678	3,359	2,785	2,582
New York	345,512	365,776	373,813	390,010	379,776
North Carolina	8,722	8,031	15,295	16,537	16,941
North Dakota	13,034	14,336	12,973	13,581	15,472
Ohio	250,780	249,812	235,397	263,460	285,526
Oklahoma	3,329	3,474	3,300	3,665	3,697
Oregon	0	0	140	135	135
Pennsylvania	344,822	365,275	362,057	393,185	399,821
Rhode Island	8,447	7,870	8,685	10,911	11,495
South Carolina	7,768	7,874	9,699	10,601	9,726
South Dakota	7,373	7,518	7,265	7,581	7,771
Tennessee	18,884	20,263	20,245	22,686	21,620
Texas	19,314	19,185	17,718	18,497	18,262
Utah	0	0	0	0	0
Vermont	580	336	1,815	596	106
Virginia	40,535	48,315	50,007	53,717	44,882
Washington	2,180	2,287	2,340	2,355	1,912
West Virginia	85,576	79,549	83,633	87,657	87,491
Wisconsin	49,574	60,803	54,365	58,684	60,473
Wyoming	6,523	6,981	7,274	7,839	8,115
Total	2,453,945	2,572,569	2,586,033	2,755,404	2,795,235

State	Fuel oil - barrels				
	1921				
	July	August	September	October	November
Alabama	8,843	6,368	7,816	7,789	8,306
Arizona	14,823	13,386	12,888	12,444	11,976
Arkansas	20,374	20,353	18,545	20,885	21,644
California	252,308	307,097	309,570	304,635	356,607
Colorado	0	0	0	0	0
Connecticut	2,734	2,903	2,971	4,085	3,415
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	48,836	48,626	50,732	53,823	57,194
Georgia	22,416	24,118	21,088	23,076	22,785
Idaho	0	0	0	0	0
Illinois	184	198	181	213	231
Indiana	315	394	587	427	447
Iowa	914	890	947	1,024	1,072
Kansas	103,014	112,270	118,358	114,000	109,597
Kentucky	353	370	360	538	370
Louisiana	43,333	44,809	43,990	41,342	42,073
Maine	2,250	2,207	8,920	9,118	6,170
Maryland	23	20	30	30	30
Massachusetts	24,001	30,794	29,792	31,729	42,513
Michigan	197	140	134	129	132
Minnesota	371	840	458	455	702
Mississippi	10,455	11,149	10,846	10,759	11,010
Missouri	31,600	34,257	35,357	37,306	12,257
Montana	175	268	284	316	256
Nebraska	8,445	11,057	11,049	11,871	11,325
Nevada	43	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	98	77	115	121	139
New Mexico	1,906	2,234	2,042	1,789	1,782
New York	9,412	12,043	10,322	18,538	12,307
North Carolina	118	120	100	115	182
North Dakota	115	149	143	143	154
Ohio	587	596	598	604	625
Oklahoma	70,527	58,524	57,434	59,116	59,040
Oregon	563	1,186	388	772	1,418
Pennsylvania	361	90	308	107	76
Rhode Island	76,123	101,569	109,976	118,057	96,985
South Carolina	0	0	0	0	0
South Dakota	1,825	1,791	2,094	2,135	1,938
Tennessee	0	0	0	0	0
Texas	260,988	282,973	281,586	276,474	256,885
Utah	0	0	0	0	0
Vermont	2,029	3,300	7,409	2,796	83
Virginia	0	0	0	0	0
Washington	4,326	11,161	17,923	17,198	17,272
West Virginia	0	0	0	0	0
Wisconsin	271	281	2,063	1,168	1,201
Wyoming	1,312	1,327	1,846	1,986	2,201
Total	1,026,568	1,149,935	1,179,250	1,187,113	1,172,400

State	Natural gas - thousands of cubic feet				
	1921				
	July	August	September	October	November
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	145,095	153,570	151,595	166,522	157,434
California	366,115	442,680	395,063	345,256	327,885
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
Distirct of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	229,553	245,162	259,408	257,090	219,858
Kentucky	13,423	30,233	21,300	11,009	7,140
Louisiana	99,923	105,700	106,075	104,688	108,729
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	534	4,692	1,653	0	2,257
Montana	1,127	1,132	1,186	1,236	1,295
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,481	6,399	8,805	12,193	11,386
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	331,723	526,731	579,013	521,546	418,934
Oklahoma	294,834	327,247	316,566	307,303	288,872
Oregon	0	0	0	0	0
Pennsylvania	39,634	73,284	135,318	128,483	115,920
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	135,336	133,927	122,933	125,600	128,129
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	230,405	243,387	251,889	279,065	265,291
Wisconsin	0	0	0	0	0
Wyoming	32,375	32,875	30,234	30,571	29,118
Total	1,929,148	2,329,609	2,381,628	2,293,152	2,084,838

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are now published within about 30 days after the end of the last month included in the report. It should be observed that the figures for the last month in the previous report -- October, in this instance -- are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most cases. The total output for October as published under date of November 30 was increased about one per cent as published in this report.

The mean daily output in kilowatt-hours by water power, steam power, and by both water and steam power for each month in 1921 is as follows:

	Water Power		Steam Power		Total
	Kwhrs.	Per cent of total	Kwhrs.	Per cent of total	Kwhrs.
January	43,300,000	37.9	70,900,000	62.1	114,200,000
February	42,700,000	37.7	70,800,000	62.3	113,400,000
March	43,400,000	39.6	66,200,000	60.4	109,600,000
April	43,600,000	40.4	64,400,000	59.6	108,000,000
May	42,700,000	40.5	62,600,000	59.5	105,300,000
June	40,500,000	37.4	67,600,000	62.6	108,100,000
July	39,500,000	37.5	66,000,000	62.5	105,500,000
August	38,700,000	35.2	71,300,000	64.8	110,000,000
September	36,700,000	32.6	75,800,000	67.4	112,500,000
October	36,800,000	31.9	78,600,000	68.1	115,400,000
November	40,800,000	33.6	80,800,000	66.4	121,500,000

The mean daily output of electricity by water power, fuel power, and by both water and fuel power for each month in 1919, 1920, and 1921 is shown graphically on page 7. The curve for 1921 indicates a decided increase in the average daily consumption of electricity in November as compared with October. This is probably due to the decrease in the hours of sunshine and to some extent to the effect of cold weather increasing the demand for electricity. The rate of production of electricity in November was about 5 per cent greater than that for October. Should the increase in December be half that for November, the output for December will be the maximum of the three years of record. The curve of total output indicates that the output for December will surpass that of any other month covered by the three years records.

The improvement in the supply of water for power purposes due to precipitation in November is reflected in the increase in the average production of electricity by water power as the November output was nearly 11 per cent greater than during October, being larger than for any month since May of this year.

The daily consumption of fuels in electric public utilities during November was as follows: coal, 93,170 tons; oil, 39,000 barrels; and gas, 69,460,000 cubic feet.

The amount of coal consumed by electric public utilities in November was nearly 6½ per cent of the total production of coal in the United States in the same month. It would have required an additional daily consumption of about 56,000 tons of coal to have generated the electricity produced by water power during November.

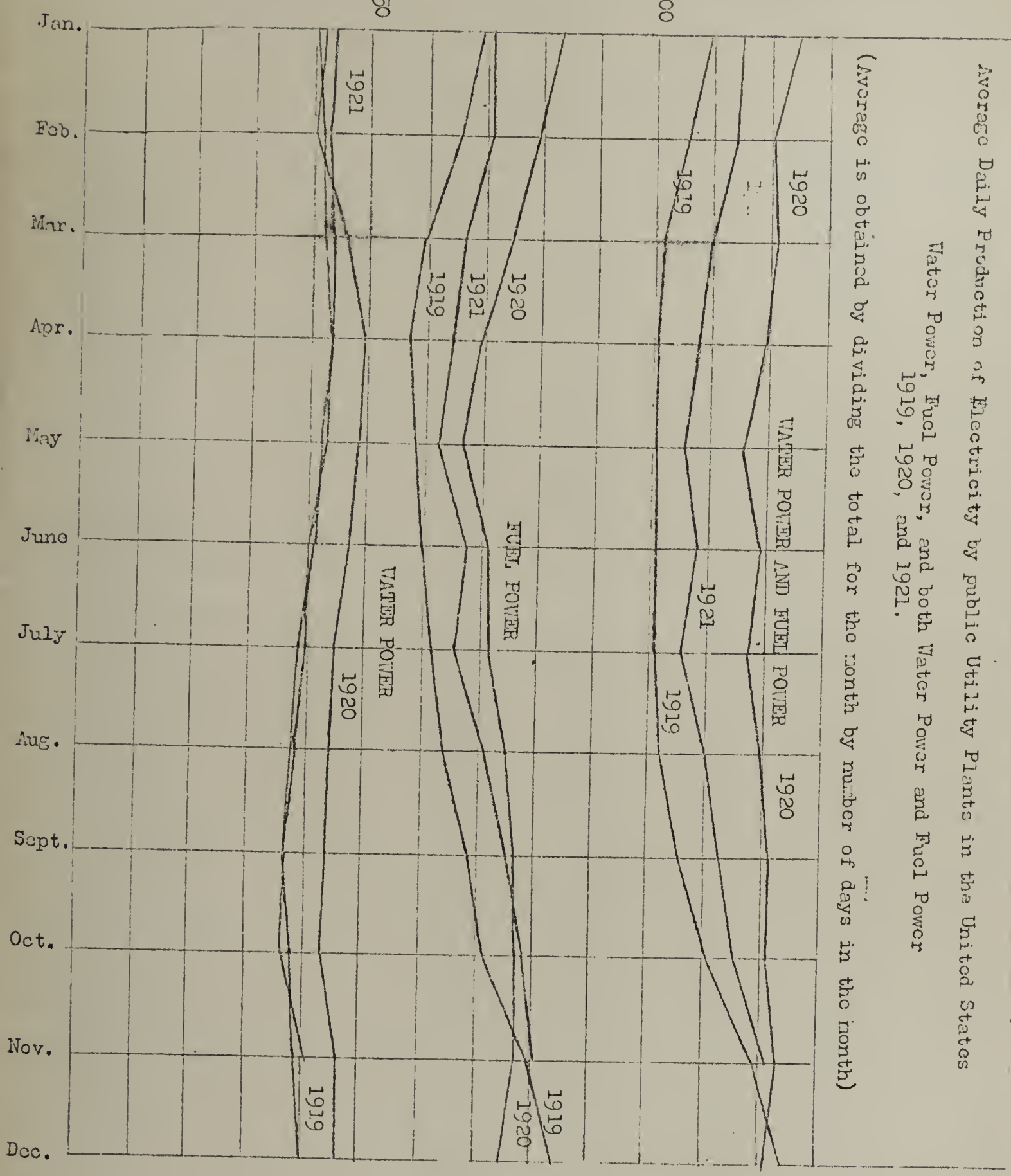
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared by A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921.

(Average is obtained by dividing the total for the month by number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

February 1, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER 1921				
	August	September	October	November	December
Alabama	22,865	13,621	15,485	23,863	31,183
Arizona	6,949	7,855	8,759	8,368	5,609
Arkansas	154	142	133	173	132
California	294,912	263,913	254,611	231,133	231,976
Colorado	15,574	15,158	10,728	9,258	14,921
Connecticut	6,051	3,593	3,958	7,956	15,260
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	966	830	634	907	965
Georgia	40,970	37,231	37,636	34,036	37,581
Idaho	54,583	44,761	41,784	43,459	49,009
Illinois	15,685	15,492	16,233	16,247	15,950
Indiana	2,518	2,983	2,967	4,162	5,318
Iowa	49,120	54,328	54,925	54,935	53,920
Kansas	1,934	1,829	1,103	1,029	1,070
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	26,880	23,930	27,681	30,300	31,949
Maryland	233	129	104	207	273
Massachusetts	18,645	10,375	14,044	24,746	29,935
Michigan	51,455	51,952	58,247	56,860	64,474
Minnesota	28,155	29,228	29,702	25,843	26,505
Mississippi	0	0	0	0	0
Missouri	3,045	857	377	1,400	2,182
Montana	45,086	45,377	48,044	47,760	49,603
Nebraska	1,565	1,570	1,423	1,175	1,082
Nevada	3,655	2,972	3,173	3,138	3,206
New Hampshire	8,555	5,205	5,669	12,803	14,854
New Jersey	128	107	77	140	245
New Mexico	83	69	66	74	68
New York	161,781	154,290	179,836	206,132	228,281
North Carolina	27,957	24,645	22,869	27,093	29,543
North Dakota	0	0	0	0	0
Ohio	1,569	1,462	1,646	3,438	3,901
Oklahoma	215	203	120	127	143
Oregon	27,281	26,013	27,353	29,247	33,977
Pennsylvania	39,726	31,035	32,922	47,726	54,084
Rhode Island	366	282	121	197	622
South Carolina	60,227	56,779	58,502	71,433	70,945
South Dakota	851	898	814	678	554
Tennessee	28,123	28,150	27,557	31,009	31,333
Texas	433	307	237	220	227
Utah	7,308	6,312	5,139	4,674	4,757
Vermont	8,548	7,153	8,010	9,201	9,793
Virginia	9,247	6,520	5,133	14,105	17,129
Washington	95,693	89,207	95,562	101,756	107,409
West Virginia	1,289	1,493	820	1,764	2,739
Wisconsin	29,406	33,163	32,761	28,975	31,442
Wyoming	159	147	158	154	189
Total	1,199,995	1,101,576	1,137,123	1,217,911	1,314,348

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

STATE	1921 August	September	October	November	December
Alabama	17,239	25,072	23,842	19,348	12,897
Arizona	3,049	3,040	2,364	2,675	2,752
Arkansas	10,797	10,437	11,095	10,646	10,765
California	81,205	80,086	74,748	88,813	89,342
Colorado	15,480	15,361	21,013	21,788	18,738
Connecticut	44,960	48,938	52,669	50,794	45,857
Delaware	5,582	5,690	6,348	6,552	7,146
District of Columbia	21,444	21,922	21,838	22,716	24,884
Florida	10,161	10,380	11,298	11,921	13,623
Georgia	7,182	9,499	11,690	9,723	8,003
Idaho	354	518	339	131	116
Illinois	228,859	227,345	246,304	259,982	278,431
Indiana	72,515	72,720	77,386	77,440	80,100
Iowa	30,417	31,078	32,204	33,299	34,985
Kansas	35,382	37,523	38,627	37,836	37,830
Kentucky	23,729	23,855	25,545	25,395	26,419
Louisiana	20,220	20,041	19,685	19,684	21,226
Maine	795	4,174	4,766	2,602	2,352
Maryland	24,877	29,630	31,514	18,891	19,092
Massachusetts	107,782	118,961	128,881	124,010	125,584
Michigan	110,519	108,892	113,292	111,799	106,395
Minnesota	35,607	34,142	39,521	43,646	44,677
Mississippi	5,089	5,221	5,483	5,520	5,363
Missouri	56,844	57,417	63,032	63,828	67,012
Montana	617	643	687	685	706
Nebraska	22,039	21,932	22,299	21,481	22,624
Nevada	26	25	24	28	31
New Hampshire	2,729	3,685	3,746	3,245	3,793
New Jersey	76,732	77,710	84,749	89,480	96,638
New Mexico	1,250	1,284	1,290	1,293	1,358
New York	327,476	334,429	360,295	355,955	380,300
North Carolina	3,848	8,246	9,061	5,257	4,450
North Dakota	2,982	2,718	2,916	3,044	3,203
Ohio	204,421	203,850	221,186	223,970	227,586
Oklahoma	17,569	17,754	18,687	18,316	18,743
Oregon	10,459	12,688	14,585	13,504	10,398
Pennsylvania	279,743	289,618	307,197	310,039	332,980
Rhode Island	34,002	36,493	43,261	35,671	34,555
South Carolina	3,877	5,089	5,691	4,823	4,816
South Dakota	3,532	3,606	3,774	3,883	4,294
Tennessee	10,281	10,792	12,091	11,522	11,822
Texas	66,739	66,141	66,702	63,514	63,765
Utah	0	0	0	0	14
Vermont	439	1,799	566	29	19
Virginia	35,867	37,562	40,976	34,647	32,441
Washington	3,105	4,602	5,479	4,422	2,309
West Virginia	84,650	85,936	98,071	97,606	99,298
Wisconsin	45,433	41,623	46,654	47,337	49,332
Wyoming	2,810	2,960	3,245	3,370	3,442
Total	2,210,706	2,273,127	2,437,216	2,421,965	2,493,006
Total by water power	1,199,195	1,101,576	1,137,123	1,217,911	1,314,343
Total by water power and fuels	3,410,701	3,374,703	3,574,339	3,639,876	3,807,354

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during December, 1921, are as follows: Alabama, 36,000; Arkansas, 347,000; Florida, 420,000; Georgia, 549,000; Louisiana, 93,000; Minnesota, 551,000; Mississippi, 998,000; Oregon, 9,793,000; South Carolina, 67,000; Washington, 1,292,000; Wisconsin, 436,000; and all o ther States (Arizona, California, Idaho, Maine, Michigan, New Mexico, Oklahoma, and Texas), 1,108,000.

Electric power produced during August, September, October, November, and December, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	August	September	October	November	December
Alabama	23,462	31,357	28,023	22,399	16,993
Arizona	0	0	0	0	0
Arkansas	9,563	9,356	9,446	9,586	10,903
California	0	0	0	0	0
Colorado	28,974	28,254	35,910	36,872	33,065
Connecticut	60,095	62,974	67,263	64,223	60,689
Delaware	6,577	6,924	7,578	7,845	8,386
District of Columbia	19,120	18,547	19,163	19,392	21,077
Florida	1,743	1,826	1,898	1,868	1,897
Georgia	6,020	11,222	15,433	12,539	10,183
Idaho	0	0	0	0	0
Illinois	326,548	318,630	335,870	357,043	387,983
Indiana	152,095	151,754	161,517	166,998	168,401
Iowa	67,045	68,674	71,937	78,366	81,219
Kansas	17,322	15,847	19,188	19,655	19,678
Kentucky	38,842	38,724	41,239	41,667	42,711
Louisiana	10,431	10,401	9,844	9,772	10,457
Maine	779	3,315	4,354	2,104	1,632
Maryland	26,958	30,788	32,194	19,946	20,337
Massachusetts	107,921	118,801	120,804	116,284	128,151
Michigan	123,617	118,009	119,325	117,430	113,096
Minnesota	47,825	42,696	49,145	56,158	60,637
Mississippi	8,475	9,294	9,615	9,262	9,165
Missouri	82,288	81,251	86,442	98,109	107,104
Montana	3,476	3,650	3,610	3,732	3,767
Nebraska	36,038	35,936	36,039	36,032	36,094
Nevada	153	138	134	154	171
New Hampshire	3,473	4,983	5,200	4,412	5,249
New Jersey	93,356	93,302	99,731	111,504	121,868
New Mexico	2,678	3,359	2,785	2,677	3,287
New York	365,776	373,813	390,085	381,791	400,490
North Carolina	8,031	15,295	16,592	10,686	9,276
North Dakota	14,336	12,973	13,581	15,906	16,495
Ohio	249,812	235,397	263,485	270,992	278,563
Oklahoma	3,474	3,300	6,432	7,047	4,167
Oregon	0	140	135	145	150
Pennsylvania	365,275	362,057	393,810	397,538	426,996
Rhode Island	7,870	8,635	10,911	11,495	10,379
South Carolina	7,874	9,699	10,361	8,996	8,406
South Dakota	7,518	7,265	7,585	7,807	8,852
Tennessee	20,263	20,245	22,686	21,405	21,715
Texas	19,185	17,718	18,497	18,222	17,011
Utah	0	0	0	0	40
Vermont	336	1,815	596	106	121
Virginia	48,315	50,007	53,717	44,386	39,932
Washington	2,287	2,340	2,355	2,229	3,010
West Virginia	79,549	83,633	87,657	84,551	85,565
Wisconsin	60,803	54,365	58,684	61,401	69,618
Wyoming	6,981	7,274	7,866	8,137	8,394
Total	2,572,569	2,586,033	2,758,774	2,778,869	2,893,380

State	Fuel oil - barrels 1921				
	August	September	October	November	December
Alabama	8,368	7,816	7,789	8,306	10,057
Arizona	13,386	12,888	12,444	11,976	11,884
Arkansas	20,353	18,545	20,885	21,136	22,204
California	307,097	309,570	304,687	355,120	387,125
Colorado	0	0	0	0	0
Connecticut	2,903	2,971	4,085	3,356	2,861
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	48,626	50,732	53,467	57,242	62,090
Georgia	24,118	21,088	23,076	22,785	22,382
Idaho	0	0	0	0	0
Illinois	198	181	217	235	225
Indiana	394	587	427	447	506
Iowa	890	947	1,024	1,072	1,152
Kansas	112,270	118,358	112,110	109,469	109,804
Kentucky	370	360	538	370	441
Louisiana	44,809	43,990	41,342	42,067	43,685
Maine	2,207	8,920	9,118	6,170	6,186
Maryland	20	30	30	30	30
Massachusetts	30,794	29,792	31,729	45,185	42,375
Michigan	140	134	129	132	131
Minnesota	840	458	455	731	704
Mississippi	11,149	10,846	10,759	11,010	12,835
Missouri	34,257	35,357	37,284	12,155	12,954
Montana	268	284	316	256	266
Nebraska	11,057	11,049	11,897	11,223	19,419
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	77	115	121	139	141
New Mexico	2,234	2,042	1,789	1,782	1,966
New York	12,043	10,322	11,667	12,307	10,054
North Carolina	120	100	115	182	180
North Dakota	149	143	143	154	162
Ohio	596	598	604	625	643
Oklahoma	58,524	57,434	62,339	32,278	45,428
Oregon	1,186	388	772	2,432	3,041
Pennsylvania	90	308	107	76	85
Rhode Island	101,569	109,976	118,057	96,985	96,698
South Carolina	0	0	0	0	0
South Dakota	1,791	2,094	2,134	1,957	2,080
Tennessee	0	0	0	0	0
Texas	282,973	281,586	276,653	254,957	253,100
Utah	0	0	0	0	0
Vermont	3,300	7,409	2,796	83	0
Virginia	0	0	0	0	0
Washington	11,161	17,923	17,198	17,352	4,139
West Virginia	0	0	0	0	0
Wisconsin	281	2,063	1,168	1,201	402
Wyoming	1,327	1,846	1,986	2,201	5,863
Total	1,149,935	1,179,250	1,131,457	1,148,184	1,193,298

State	Natural gas - thousands of cubic feet				
	1921				
	August	September	October	November	December
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	153,570	151,595	166,522	155,717	149,538
California	442,680	395,063	345,256	327,885	228,525
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	245,162	259,408	257,090	219,098	243,398
Kentucky	30,233	21,300	11,009	7,140	9,373
Louisiana	105,700	106,075	104,638	108,729	112,284
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	.0
Minnesota	0	0	0	0	1,000
Mississippi	0	0	0	0	0
Missouri	4,692	1,653	0	2,257	1,203
Montana	1,132	1,186	1,236	1,295	1,360
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,399	6,805	12,193	11,386	11,863
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	526,731	579,013	521,809	418,879	300,814
Oklahoma	327,247	316,566	293,697	417,310	384,979
Oregon	0	0	0	0	0
Pennsylvania	73,284	135,318	128,554	116,131	133,503
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	133,927	122,933	125,600	131,453	136,410
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	243,367	251,869	279,065	265,291	253,367
Wisconsin	0	0	0	0	0
Wyoming	32,875	30,234	30,571	29,118	4,620
Total	2,329,609	2,381,628	2,279,880	2,214,282	1,974,327

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are now published about 30 days after the last month included in the report. It should be observed that the figures for the last month, and sometimes for the last two months, in the previous report are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most instances.

The curve of total daily output for 1921 on page 8 shows a small increase in the daily rate for December as compared with November; the electricity produced by fuels is practically the same for November and December, the increase in the total being due to the increase in the amount of electricity produced by water power. In the three years of record, the following months exceed the mean daily output for December, 1921: December, 1919; and January and November, 1920. An increase of but 1.4 per cent in the output for January of this year over that for December would make the January output the maximum for the three-year period.

The following tables show the total amount of electricity produced by public utility plants in the United States, the mean daily production of electricity, and the consumption of fuel for each month in 1921.

Monthly Production of Electricity by Public Utility Plants

1921

	Water Power Kw.-hrs.	Fuel Power Kw.-hrs.	Total Kw.-hrs.
January	1,342,689,000	2,196,804,000	3,541,493,000
February	1,195,537,000	1,970,504,000	3,166,041,000
March	1,345,507,000	2,049,480,000	3,394,987,000
April	1,308,272,000	1,931,199,000	3,239,471,000
May	1,322,201,000	1,941,565,000	3,263,766,000
June	1,215,972,000	2,028,121,000	3,244,093,000
July	1,224,813,000	2,044,896,000	3,269,709,000
August	1,199,995,000	2,210,706,000	3,410,701,000
September	1,101,576,000	2,273,127,000	3,374,703,000
October	1,137,123,000	2,437,216,000	3,574,339,000
November	1,217,911,000	2,421,965,000	3,639,876,000
December	1,314,348,000	2,493,006,000	3,807,354,000
The year	14,925,934,000	26,000,599,000	40,926,533,000

Mean Daily Production of Electricity by Public Utility Plants

	Water Power Kw.-hrs.	Per cent of total	Fuel Power Kw.-hrs.	Per cent of total	Total Kw.-hrs.
January	43,300,000	37.9	70,900,000	62.1	114,200,000
February	42,700,000	37.7	70,800,000	62.3	113,400,000
March	43,400,000	39.3	66,200,000	60.4	109,600,000
April	43,600,000	40.4	64,400,000	59.6	108,000,000
May	42,700,000	40.5	62,600,000	59.5	105,300,000
June	40,500,000	37.4	67,600,000	62.6	108,100,000
July	39,500,000	37.5	66,000,000	62.5	105,500,000
August	38,700,000	35.2	71,300,000	64.8	110,000,000
September	36,700,000	32.6	75,800,000	67.4	112,500,000
October	36,700,000	31.8	78,300,000	68.2	115,300,000
November	40,600,000	33.5	80,700,000	66.5	121,300,000
December	42,400,000	34.5	80,400,000	65.5	122,800,000
The year	40,893,000	36.5	71,233,000	63.5	112,129,000

Monthly Consumption of Fuels by Public Utility Plants

	Coal Tons	Fuel oil Bbls.	Gas M cu. ft.
January	2,984,154	897,088	1,707,413
February	2,629,563	781,436	1,464,682
March	2,641,538	848,866	1,548,664
April	2,416,579	843,193	1,353,783
May	2,415,009	853,519	1,994,126
June	2,434,349	916,088	2,068,248
July	2,453,945	1,026,568	1,929,148
August	2,572,569	1,149,935	2,329,609
September	2,583,033	1,179,250	2,381,626
October	2,758,774	1,181,457	2,279,880
November	2,778,869	1,145,184	2,214,282
December	2,893,380	1,193,298	1,974,827
The year	31,564,812	12,015,883	23,746,290

The annual production of electricity and consumption of fuel by public utility plants in the United States for the period of record is shown in the following tables:

Year	Production of Electricity: Water Power Kw.-hrs.	Per cent of total	Fuel Power Kw.-hrs.	Per cent of total	Total Kw.-hrs.	Change from previous yr. Per cent
1919	14,606,000,000	37.5	24,315,000,000	62.5	38,921,000,000	
1920	16,545,000,000	37.6	27,459,000,000	62.4	44,004,000,000	+ 13.1
1921	14,926,000,000	36.5	26,001,000,000	63.5	40,927,000,000	- 7.0

Year	Consumption of Fuels: Coal Short tons	Change from previous yr. Per cent	Fuel Oil Barrels	Change from previous yr. Per cent	Gas M cu. ft.	Change from previous yr. Per cent
1919	35,100,000		11,050,000		21,406,000	
1920	37,244,000	+6.1	13,133,000	+ 18.2	24,702,000	+15.4
1921	31,565,000	-15.2	12,016,000	- 8.4	23,746,000	- 3.9

If the oil and gas are converted to equivalent coal and the kilowatt-hours produced by the burning of wood subtracted from the kilowatt-hours produced by fuel power, the rate of consumption of equivalent coal per kilowatt-hour in public utility plants is found to be as follows: 1919, 3.17 pounds; 1920, 3.00 pounds; and 1921, 2.73 pounds. This indicates a marked increase in efficiency in the consumpti on of fuel.

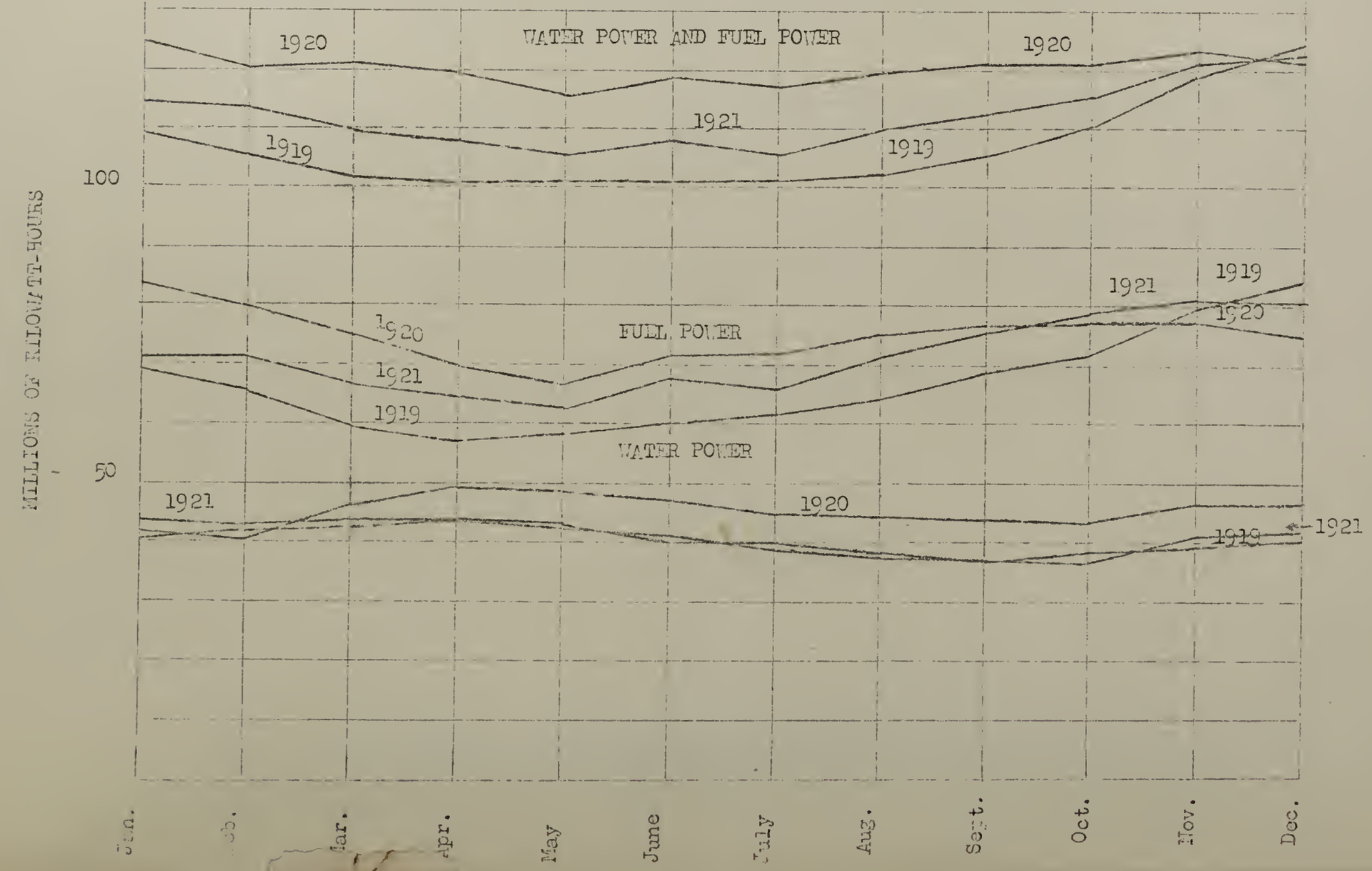
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



THIS REPORT IS PUBLISHED MONTHLY. IT WILL BE MAILED REGULARLY TO THOSE WHO ASK FOR IT.- ADDRESS DIRECTOR, UNITED STATES GEOLOGICAL SURVEY, WASHINGTON, D. C.

338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — February 1, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1921.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921				
	August	September	October	November	December
Alabama	22,885	13,021	15,435	23,863	31,183
Arizona	6,949	7,855	8,759	8,368	5,609
Arkansas	154	142	133	173	132
California	394,912	263,913	254,611	231,133	231,976
Colorado	15,574	15,158	10,738	9,258	14,921
Connecticut	6,031	3,593	3,958	7,956	15,260
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	966	830	634	907	965
Georgia	40,970	37,231	37,636	34,036	37,581
Idaho	54,583	44,761	41,784	43,459	49,009
Illinois	15,685	15,492	16,233	16,247	15,950
Indiana	2,518	2,983	2,967	4,162	5,318
Iowa	49,120	54,328	54,925	54,935	55,920
Kansas	1,934	1,829	1,103	1,029	1,070
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	26,880	23,930	27,681	30,300	31,949
Maryland	233	129	104	207	273
Massachusetts	18,645	10,375	14,044	24,746	29,935
Michigan	51,455	51,952	58,247	56,860	64,474
Minnesota	28,155	29,228	28,702	25,843	26,505
Mississippi	0	0	0	0	0
Missouri	3,045	857	377	1,400	2,132
Montana	45,086	45,377	48,044	47,760	49,603
Nebraska	1,565	1,570	1,423	1,175	1,082
Nevada	3,655	2,972	3,173	3,138	3,206
New Hampshire	8,555	5,205	5,669	12,803	14,854
New Jersey	128	107	77	140	245
New Mexico	83	69	66	74	68
New York	161,731	154,290	179,836	206,132	228,281
North Carolina	27,937	24,645	22,859	27,093	29,543
North Dakota	0	0	0	0	0
Ohio	1,569	1,462	1,646	3,438	3,901
Oklahoma	215	203	120	127	143
Oregon	27,281	26,013	27,353	29,247	33,977
Pennsylvania	39,726	31,035	32,922	47,726	54,084
Rhode Island	306	282	121	197	622
South Carolina	60,227	56,779	58,502	71,433	70,945
South Dakota	851	893	814	673	554
Tennessee	28,123	28,150	27,557	31,009	31,333
Texas	433	307	237	220	227
Utah	7,308	6,312	5,139	4,674	4,757
Vermont	8,548	7,153	8,010	9,201	9,793
Virginia	9,247	6,520	5,133	14,105	17,129
Washington	95,693	89,207	95,562	101,756	107,409
West Virginia	1,289	1,493	820	1,764	2,739
Wisconsin	29,406	33,163	32,761	28,975	31,442
Wyoming	159	147	158	154	189
Total	1,199,995	1,101,576	1,137,123	1,217,911	1,314,348

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

STATE	1921 August	September	October	November	December
Alabama	17,239	25,072	23,842	19,348	12,897
Arizona	3,049	3,040	2,864	2,675	2,752
Arkansas	10,797	10,437	11,095	10,646	10,765
California	81,205	80,086	74,748	88,813	89,342
Colorado	15,480	15,361	21,013	21,788	18,738
Connecticut	44,960	48,938	52,669	50,794	45,857
Delaware	5,582	5,690	6,348	6,552	7,146
District of Columbia	21,444	21,922	21,838	22,716	24,884
Florida	10,161	10,380	11,298	11,921	13,623
Georgia	7,182	9,499	11,690	9,723	8,003
Idaho	354	518	339	131	116
Illinois	228,859	227,345	246,304	259,982	278,431
Indiana	72,515	72,720	77,386	77,440	80,100
Iowa	30,417	31,078	32,204	33,299	34,985
Kansas	35,382	37,523	38,627	37,336	37,830
Kentucky	23,729	23,855	25,545	25,395	26,419
Louisiana	20,220	20,041	19,635	19,684	21,226
Maine	795	4,174	4,766	2,602	2,352
Maryland	24,877	29,630	31,514	18,891	19,092
Massachusetts	107,782	118,961	128,881	124,010	125,584
Michigan	110,519	108,892	113,292	111,799	106,395
Minnesota	35,607	34,142	39,521	43,646	44,677
Mississippi	5,089	5,221	5,483	5,520	5,363
Missouri	56,844	57,417	63,032	63,828	67,012
Montana	617	643	687	685	706
Nebraska	22,029	21,932	22,299	21,481	22,624
Nevada	28	25	24	28	31
New Hampshire	2,729	3,685	3,746	3,245	3,793
New Jersey	76,732	77,710	84,749	89,480	96,638
New Mexico	1,250	1,284	1,290	1,298	1,358
New York	327,476	334,429	360,295	355,955	380,800
North Carolina	3,848	8,246	9,061	5,257	4,450
North Dakota	2,982	2,718	2,916	3,044	3,203
Ohio	204,421	203,850	221,186	223,970	227,586
Oklahoma	17,569	17,754	18,687	18,316	18,743
Oregon	10,459	12,688	14,585	13,504	10,398
Pennsylvania	279,743	289,618	307,197	310,039	332,980
Rhode Island	34,002	36,493	43,261	35,671	34,555
South Carolina	3,877	5,089	5,691	4,823	4,816
South Dakota	3,532	3,606	3,774	3,883	4,294
Tennessee	10,281	10,792	12,091	11,322	11,822
Texas	66,739	66,141	66,702	63,514	63,765
Utah	0	0	0	0	14
Vermont	439	1,799	586	29	19
Virginia	35,867	37,562	40,976	34,647	32,441
Washington	3,105	4,602	5,479	4,422	2,309
West Virginia	84,650	85,936	98,071	97,606	99,298
Wisconsin	45,433	41,623	46,654	47,337	49,332
Wyoming	2,810	2,960	3,245	3,370	3,442
Total	2,210,706	2,273,127	2,437,216	2,421,965	2,493,006
Total by water power	1,199,195	1,101,576	1,137,123	1,217,911	1,314,348
Total by water power and fuels	3,410,701	3,374,703	3,574,339	3,639,876	3,807,354

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during December, 1921, are as follows: Alabama, 36,000; Arkansas, 347,000; Florida, 420,000; Georgia, 549,000; Louisiana, 93,000; Minnesota, 551,000; Mississippi, 998,000; Oregon, 9,793,000; South Carolina, 67,000; Washington, 1,292,000; Wisconsin, 436,000; and all o ther States (Arizona, California, Idaho, Maine, Michigan, New Mexico, Oklahoma, and Texas), 1,108,000.

Electric power produced during August, September, October, November, and December, 1921, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				
	August	September	October	November	December
Alabama	23,462	31,357	28,023	22,399	16,993
Arizona	0	0	0	0	0
Arkansas	9,568	9,356	9,446	9,586	10,903
California	0	0	0	0	0
Colorado	28,974	28,254	35,910	36,872	33,065
Connecticut	60,095	62,974	67,265	64,223	60,689
Delaware	6,577	6,924	7,578	7,845	8,386
District of Columbia	19,120	18,547	19,163	19,392	21,077
Florida	1,748	1,826	1,898	1,868	1,897
Georgia	6,020	11,222	15,433	12,539	10,183
Idaho	0	0	0	0	0
Illinois	326,548	316,630	335,870	357,043	387,983
Indiana	152,095	151,754	161,517	166,998	168,401
Iowa	67,045	68,674	71,987	78,366	81,219
Kansas	17,322	15,847	19,188	19,655	19,678
Kentucky	38,842	38,724	41,239	41,667	42,711
Louisiana	10,431	10,401	9,844	9,772	10,457
Maine	779	3,315	4,354	2,104	1,632
Maryland	26,958	30,788	32,194	19,946	20,337
Massachusetts	107,921	118,801	120,804	116,284	128,151
Michigan	123,617	118,009	119,325	117,430	113,096
Minnesota	47,825	42,696	49,145	56,158	60,637
Mississippi	8,475	9,294	9,615	9,262	9,165
Missouri	82,288	81,251	86,442	98,109	107,104
Montana	3,476	3,650	3,610	3,732	3,767
Nebraska	36,038	35,936	36,039	36,032	36,094
Nevada	153	138	134	154	171
New Hampshire	3,473	4,983	5,200	4,412	5,249
New Jersey	93,356	93,302	99,731	111,504	121,868
New Mexico	2,678	3,359	2,785	2,677	3,287
New York	365,776	373,813	390,085	381,791	400,490
North Carolina	8,031	15,295	16,592	10,686	9,276
North Dakota	14,336	12,973	13,581	15,906	16,495
Ohio	249,812	235,397	263,485	270,992	278,563
Oklahoma	3,474	3,300	6,432	7,047	4,167
Oregon	0	140	135	145	150
Pennsylvania	365,275	362,057	393,610	397,538	426,996
Rhode Island	7,870	8,685	10,911	11,495	10,379
South Carolina	7,874	9,699	10,361	8,996	8,406
South Dakota	7,518	7,265	7,585	7,807	8,852
Tennessee	20,263	20,245	22,686	21,405	21,715
Texas	19,185	17,718	18,497	18,222	17,011
Utah	0	0	0	0	40
Vermont	336	1,815	596	106	121
Virginia	48,315	50,007	53,717	44,386	39,932
Washington	2,287	2,340	2,355	2,229	3,010
West Virginia	79,549	83,633	87,657	84,551	85,565
Wisconsin	60,803	54,365	58,684	61,401	69,618
Wyoming	6,981	7,274	7,866	8,137	8,394
Total	2,572,569	2,586,033	2,758,774	2,778,869	2,893,380

State	Fuel oil - barrels 1921				
	August	September	October	November	December
Alabama	8,368	7,816	7,789	8,306	10,057
Arizona	13,386	12,888	12,444	11,976	11,884
Arkansas	20,353	18,545	20,885	21,136	22,204
California	307,097	309,570	304,687	355,120	387,125
Colorado	0	0	0	0	0
Connecticut	2,903	2,971	4,085	3,356	2,861
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	48,626	50,732	53,467	57,242	62,090
Georgia	24,118	21,088	23,076	22,785	22,382
Idaho	0	0	0	0	0
Illinois	198	181	217	235	225
Indiana	394	587	427	447	506
Iowa	890	947	1,024	1,072	1,152
Kansas	112,270	118,358	112,110	109,469	109,804
Kentucky	370	360	538	370	441
Louisiana	44,809	43,990	41,342	42,067	43,685
Maine	2,207	8,920	9,118	6,170	6,186
Maryland	20	30	30	30	30
Massachusetts	30,794	29,792	31,729	45,185	42,375
Michigan	140	134	129	132	131
Minnesota	840	458	455	731	704
Mississippi	11,149	10,846	10,759	11,010	12,835
Missouri	34,257	35,357	37,284	12,155	12,954
Montana	268	284	316	256	266
Nebraska	11,057	11,049	11,897	11,223	19,419
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	77	115	121	139	141
New Mexico	2,234	2,042	1,789	1,782	1,966
New York	12,043	10,322	11,667	12,307	10,054
North Carolina	120	100	115	182	180
North Dakota	149	143	143	154	162
Ohio	596	598	604	625	643
Oklahoma	58,524	57,434	62,339	32,278	45,428
Oregon	1,186	388	772	2,432	3,041
Pennsylvania	90	308	107	76	85
Rhode Island	101,569	109,976	118,057	96,985	96,698
South Carolina	0	0	0	0	0
South Dakota	1,791	2,094	2,134	1,957	2,080
Tennessee	0	0	0	0	0
Texas	282,973	281,586	276,653	254,957	253,100
Utah	0	0	0	0	0
Vermont	3,300	7,409	2,796	83	0
Virginia	0	0	0	0	0
Washington	11,161	17,923	17,198	17,352	4,139
West Virginia	0	0	0	0	0
Wisconsin	281	2,063	1,168	1,201	402
Wyoming	1,327	1,846	1,986	2,201	5,863
Total	1,149,935	1,179,250	1,181,457	1,145,184	1,193,298

State	Natural gas - thousands of cubic feet				
	1921				
	August	September	October	November	December
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	153,570	151,595	166,522	155,717	149,538
California	442,680	395,063	345,256	327,885	228,525
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	245,162	259,408	257,090	219,098	243,398
Kentucky	30,233	21,300	11,009	7,140	9,373
Louisiana	105,700	106,075	104,638	108,729	112,284
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	1,000
Mississippi	0	0	0	0	0
Missouri	4,692	1,653	0	2,257	1,203
Montana	1,132	1,186	1,236	1,295	1,360
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,399	6,805	12,193	11,386	11,863
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	526,731	579,013	521,809	418,879	300,814
Oklahoma	327,247	316,566	293,697	417,310	384,979
Oregon	0	0	0	0	0
Pennsylvania	73,284	135,318	128,554	116,131	133,503
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	133,927	123,933	125,600	131,456	136,410
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	243,367	251,889	279,065	265,291	253,367
Wisconsin	0	0	0	0	0
Wyoming	32,875	30,234	30,571	29,118	4,620
Total	2,323,609	2,381,628	2,279,880	2,214,282	1,974,827

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are now published about 30 days after the last month included in the report. It should be observed that the figures for the last month, and sometimes for the last two months, in the previous report are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most instances.

The curve of total daily output for 1921 on page 8 shows a small increase in the daily rate for December as compared with November; the electricity produced by fuels is practically the same for November and December, the increase in the total being due to the increase in the amount of electricity produced by water power. In the three years of record, the following months exceed the mean daily output for December, 1921: December, 1919; and January and November, 1920. An increase of but 1.4 per cent in the output for January of this year over that for December would make the January output the maximum for the three-year period.

The following tables show the total amount of electricity produced by public utility plants in the United States, the mean daily production of electricity, and the consumption of fuel for each month in 1921.

Monthly Production of Electricity by Public Utility Plants

1921

	Water Power Kw.-hrs.	Fuel Power Kw.-hrs.	Total Kw.-hrs.
January	1,342,689,000	2,198,804,000	3,541,493,000
February	1,195,527,000	1,970,514,000	3,166,041,000
March	1,345,507,000	2,049,480,000	3,394,987,000
April	1,308,272,000	1,931,199,000	3,239,471,000
May	1,322,201,000	1,941,565,000	3,263,766,000
June	1,215,972,000	2,028,121,000	3,244,093,000
July	1,224,813,000	2,044,896,000	3,269,709,000
August	1,199,995,000	2,210,706,000	3,410,701,000
September	1,101,576,000	2,273,127,000	3,374,703,000
October	1,137,123,000	2,437,216,000	3,574,339,000
November	1,217,911,000	2,421,965,000	3,639,876,000
December	1,314,348,000	2,493,006,000	3,807,354,000
The year	14,925,934,000	26,000,599,000	40,926,533,000

Mean Daily Production of Electricity by Public Utility Plants

	Water Power Kw.-hrs.	Per cent of total	Fuel Power Kw.-hrs.	Per cent of total	Total Kw.-hrs.
January	43,300,000	37.9	70,900,000	62.1	114,300,000
February	42,700,000	37.7	70,800,000	62.3	113,400,000
March	43,400,000	39.6	66,300,000	60.4	109,800,000
April	43,600,000	40.4	64,400,000	59.6	108,000,000
May	42,700,000	40.5	62,600,000	59.5	105,300,000
June	40,500,000	37.4	67,600,000	62.6	108,100,000
July	39,500,000	37.5	66,000,000	62.5	105,500,000
August	36,700,000	35.2	71,300,000	64.8	110,000,000
September	36,700,000	32.6	75,800,000	67.4	112,500,000
October	36,700,000	31.8	78,600,000	68.2	115,300,000
November	40,600,000	33.5	80,700,000	66.5	121,300,000
December	42,400,000	34.5	80,400,000	65.5	122,800,000
The year	40,893,000	36.5	71,233,000	63.5	112,129,000

Monthly Consumption of Fuels by Public Utility Plants

	Coal Tons	Fuel oil Bbls.	Gas M cu. ft.
January	2,984,154	897,088	1,707,413
February	2,629,563	781,436	1,464,682
March	2,641,588	848,866	1,548,664
April	2,416,579	843,193	1,353,783
May	2,415,009	853,519	1,994,126
June	2,434,349	916,088	2,068,248
July	2,453,945	1,026,568	1,929,148
August	2,572,569	1,149,935	2,329,609
September	2,586,033	1,179,250	2,381,628
October	2,758,774	1,181,457	2,279,880
November	2,778,869	1,145,184	2,214,282
December	2,893,380	1,193,298	1,974,827
The year	31,564,812	12,015,882	23,746,290

The annual production of electricity and consumption of fuel by public utility plants in the United States for the period of record is shown in the following tables:

Year	Production of Electricity: Water Power Kw.-hrs.	Per cent of total	Fuel Power Kw.-hrs.	Per cent of total	Total Kw.-hrs.	Change from previous yr. Per cent
1919	14,606,000,000	37.5	24,315,000,000	62.5	38,921,000,000	
1920	16,545,000,000	37.6	27,459,000,000	62.4	44,004,000,000	+ 13.1
1921	14,926,000,000	36.5	26,001,000,000	63.5	40,927,000,000	- 7.0

Year	Consumption of Fuels: Coal Short tons	Change from previous yr. Per cent	Fuel Oil Barrels	Change from previous yr. Per cent	Gas M cu. ft.	Change from previous yr. Per cent
1919	35,100,000		11,050,000		21,406,000	
1920	37,244,000	+6.1	13,123,000	+ 18.2	24,702,000	+15.4
1921	31,565,000	-15.2	12,016,000	- 8.4	23,746,000	- 3.9

If the oil and gas are converted to equivalent coal and the kilowatt-hours produced by the burning of wood subtracted from the kilowatt-hours produced by fuel power, the rate of consumption of equivalent coal per kilowatt-hour in public utility plants is found to be as follows: 1919, 3.17 pounds; 1920, 3.00 pounds; and 1921, 2.73 pounds. This indicates a marked increase in efficiency in the consumpti on of fuel.

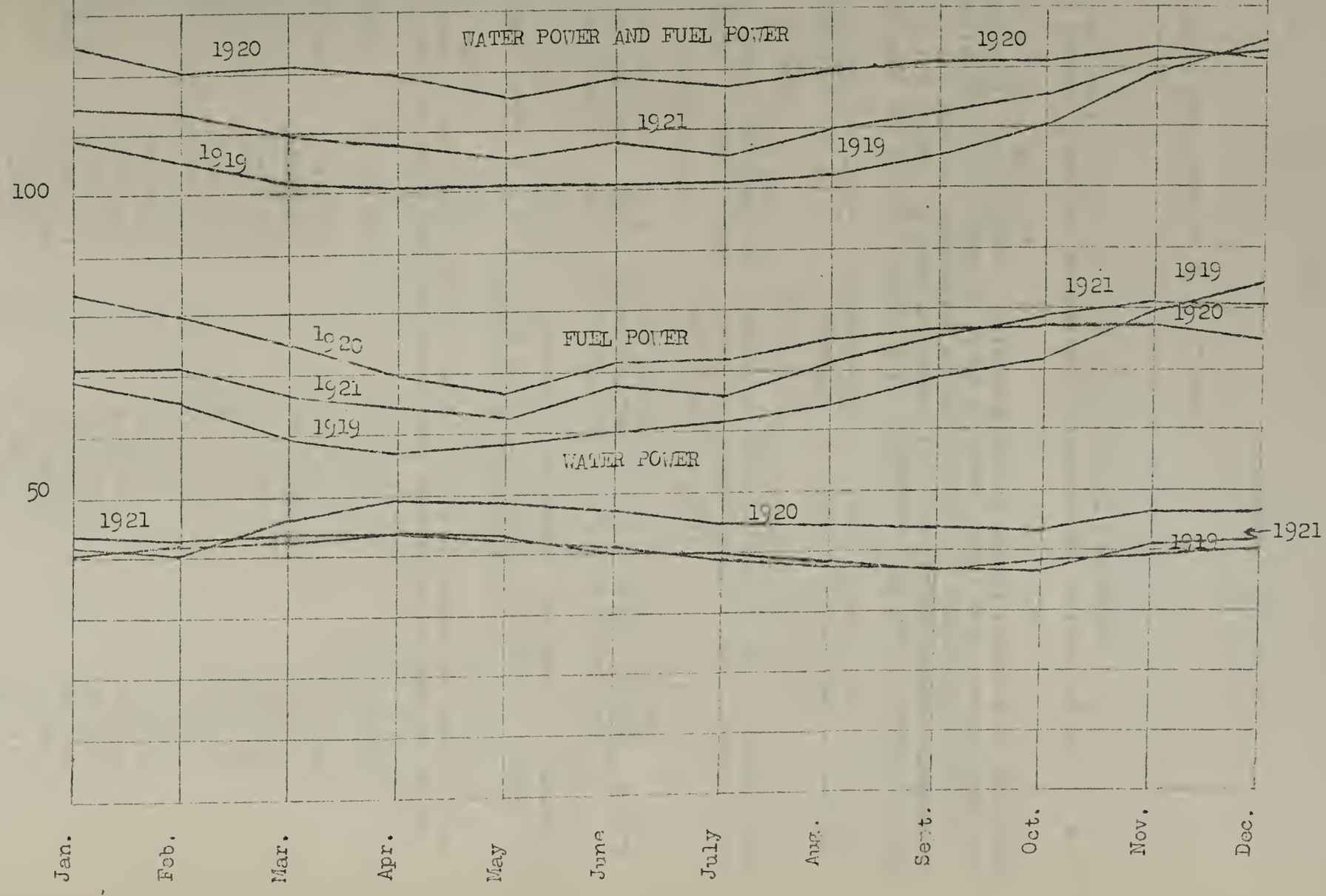
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919, 1920, and 1921

(Average is obtained by dividing the total for the month by number of days in the month)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

March 1, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1921, AND JANUARY, 1922.

Compiled by
Division of Power Resources, United States Geological Survey

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921				1922
	September	October	November	December	January
Alabama	13,621	15,485	23,863	31,183	38,235
Arizona	7,855	8,759	8,368	5,609	4,593
Arkansas	142	133	173	132	132
California	263,913	254,611	231,133	232,056	243,664
Colorado	15,158	10,728	9,258	14,921	14,706
Connecticut	3,593	3,958	7,956	15,270	9,162
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	830	634	907	965	722
Georgia	37,231	37,636	34,036	38,868	38,837
Idaho	44,761	41,784	43,459	46,020	47,122
Illinois	15,492	16,233	16,247	15,984	14,925
Indiana	2,983	2,967	4,162	5,318	4,891
Iowa	54,320	54,925	54,935	53,859	51,240
Kansas	1,828	1,103	1,029	1,070	1,018
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	23,930	27,681	30,300	31,973	31,430
Maryland	129	104	194	260	250
Massachusetts	10,375	14,044	24,746	29,935	25,595
Michigan	51,952	58,247	56,360	64,474	52,587
Minnesota	23,228	29,702	25,843	26,508	20,420
Mississippi	0	0	0	0	0
Missouri	337	377	1,400	2,182	2,358
Montana	45,377	48,044	47,760	49,174	55,116
Nebraska	1,570	1,423	1,175	1,082	1,195
Nevada	2,972	3,173	3,138	3,201	3,220
New Hampshire	5,205	5,660	12,303	14,942	10,321
New Jersey	107	77	140	244	157
New Mexico	69	66	74	68	62
New York	154,290	179,836	206,135	228,286	213,532
North Carolina	24,845	22,859	27,093	25,334	26,210
North Dakota	0	0	0	0	0
Ohio	1,462	1,648	3,415	3,866	3,098
Oklahoma	203	120	127	152	155
Oregon	23,013	27,353	29,047	33,586	35,213
Pennsylvania	31,035	32,922	47,726	54,088	46,025
Rhode Island	262	121	197	622	357
South Carolina	56,779	58,502	71,433	72,555	71,744
South Dakota	898	814	678	554	514
Tennessee	28,150	27,557	31,009	31,333	31,045
Texas	307	237	375	432	215
Utah	6,312	5,139	4,874	4,772	4,362
Vermont	7,153	8,010	9,201	9,793	8,886
Virginia	6,520	5,133	14,105	17,328	19,095
Washington	89,207	95,562	101,756	107,225	108,425
West Virginia	1,493	820	1,764	2,739	2,732
Wisconsin	33,163	32,761	28,975	31,334	28,600
Wyoming	147	158	154	160	154
Total	1,101,578	1,137,123	1,217,833	1,312,502	1,276,299

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

STATE	1921				1922
	September	October	November	December	January
Alabama	25,072	23,842	19,348	12,897	9,446
Arizona	3,040	2,864	2,675	2,762	2,794
Arkansas	10,437	11,095	10,646	10,765	10,778
California	80,086	74,748	88,813	89,342	70,323
Colorado	15,361	21,013	21,788	18,736	19,328
Connecticut	48,938	52,669	50,794	45,653	49,062
Delaware	5,690	6,348	6,552	7,146	7,018
District of Columbia	21,922	21,838	22,716	24,884	24,351
Florida	10,380	11,298	11,953	13,673	13,717
Georgia	9,499	11,690	9,723	7,446	6,999
Idaho	518	339	131	116	156
Illinois	227,345	246,304	259,982	282,444	277,555
Indiana	72,720	77,386	77,476	80,141	79,967
Iowa	31,078	32,204	33,299	35,043	35,470
Kansas	37,523	38,627	37,825	37,862	38,291
Kentucky	23,855	25,545	25,404	26,430	26,628
Louisiana	20,041	19,685	19,684	21,216	21,462
Maine	4,174	4,766	2,602	696	1,890
Maryland	29,630	31,514	18,886	19,087	24,099
Massachusetts	118,961	128,881	124,010	127,697	137,567
Michigan	108,892	113,292	111,803	107,012	114,629
Minnesota	34,142	39,521	43,670	44,689	51,625
Mississippi	5,221	5,483	5,520	5,363	5,247
Missouri	57,417	63,032	63,828	67,018	67,544
Montana	643	687	685	719	658
Nebraska	21,932	22,299	21,484	22,637	21,749
Nevada	25	24	28	31	31
New Hampshire	3,685	3,746	3,258	3,718	3,611
New Jersey	77,710	84,749	89,480	96,705	95,364
New Mexico	1,284	1,290	1,298	1,368	1,349
New York	334,429	360,295	355,956	380,787	390,254
North Carolina	8,246	9,061	5,257	4,327	3,964
North Dakota	2,718	2,916	3,044	3,171	3,027
Ohio	203,850	221,136	223,574	228,120	228,975
Oklahoma	17,754	18,687	18,325	18,548	18,151
Oregon	12,688	14,585	13,504	10,401	8,596
Pennsylvania	289,618	307,197	310,045	332,327	326,601
Rhode Island	36,493	43,261	35,671	34,555	41,931
South Carolina	5,089	5,691	4,823	4,854	4,443
South Dakota	3,606	3,774	3,905	4,337	4,170
Tennessee	10,792	12,091	11,322	11,825	11,606
Texas	66,141	66,702	63,330	63,872	64,356
Utah	0	0	0	14	22
Vermont	1,799	566	29	19	61
Virginia	37,562	40,976	34,647	32,734	30,735
Washington	4,602	5,479	4,422	2,287	2,994
West Virginia	85,936	98,071	97,636	99,070	101,905
Wisconsin	41,623	46,654	47,337	49,334	49,585
Wyoming	2,960	3,245	3,370	3,441	3,434
Total	2,273,127	2,437,216	2,421,560	2,497,335	2,514,018
Total by water power	1,101,576	1,137,123	1,217,833	1,312,502	1,276,299
Total by water power and fuels	3,374,703	3,574,339	3,639,393	3,809,837	3,790,317

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during January, 1922, are as follows: Alabama, 35,000; Arkansas, 418,000; Florida 460,000; Georgia, 575,000; Louisiana, 98,000; Michigan, 80,000; Minnesota, 549,000; Mississippi, 982,000; Oregon, 7,442,000; South Carolina, 65,000; Texas, 139,000; Washington, 1,804,000; Wisconsin, 452,000; and all other States (Arizona, California, Idaho, Maine, New Mexico, and Oklahoma), 1,005,000.

Electric power produced during September, October, November, and December, 1921, and January, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921				1922
	September	October	November	December	January
Alabama	31,357	28,023	22,399	16,993	13,461
Arizona	0	0	0	0	0
Arkansas	9,356	9,446	9,586	10,903	9,147
California	0	0	0	0	0
Colorado	28,254	35,910	36,872	33,122	32,565
Connecticut	62,974	67,265	64,223	60,389	65,548
Delaware	6,924	7,578	7,345	8,386	8,768
District of Columbia	18,547	19,163	19,392	21,077	20,577
Florida	1,826	1,898	1,868	1,897	1,823
Georgia	11,222	15,433	12,539	8,733	8,781
Idaho	0	0	0	0	0
Illinois	318,630	335,870	357,043	393,114	384,750
Indiana	151,754	161,517	166,898	167,597	168,435
Iowa	68,674	71,987	78,366	81,500	82,869
Kansas	15,847	19,188	19,505	19,373	20,879
Kentucky	38,724	41,239	41,700	42,748	42,800
Louisiana	10,401	9,844	9,772	10,457	10,501
Maine	3,315	4,354	2,104	942	1,575
Maryland	30,788	32,194	19,946	20,337	25,078
Massachusetts	118,801	120,804	116,284	129,294	132,131
Michigan	118,009	119,325	117,436	114,209	120,456
Minnesota	42,696	49,145	56,218	60,775	69,445
Mississippi	9,284	9,615	9,262	9,165	8,745
Missouri	81,251	86,442	98,109	107,217	107,334
Montana	3,650	3,810	3,732	3,835	3,614
Nebraska	35,936	36,039	36,032	36,185	35,872
Nevada	136	134	154	171	170
New Hampshire	4,933	5,200	4,459	5,138	4,507
New Jersey	93,302	99,731	111,504	122,214	116,784
New Mexico	3,359	2,785	2,677	3,296	3,356
New York	373,813	390,085	381,806	400,554	412,932
North Carolina	15,295	16,592	10,686	8,800	8,379
North Dakota	12,973	13,581	15,906	16,397	15,748
Ohio	235,397	263,485	269,548	279,701	287,755
Oklahoma	3,300	6,432	7,047	8,119	7,830
Oregon	140	135	145	150	150
Pennsylvania	362,057	393,810	397,543	426,466	428,917
Rhode Island	8,685	10,911	11,495	10,379	10,003
South Carolina	9,699	10,361	8,996	8,486	8,316
South Dakota	7,265	7,585	7,801	8,975	8,279
Tennessee	20,245	22,686	21,405	21,849	21,249
Texas	17,718	18,497	18,220	17,281	21,335
Utah	0	0	0	40	40
Vermont	1,815	596	106	121	217
Virginia	50,007	53,717	44,386	40,378	37,229
Washington	2,340	2,355	2,229	2,905	3,141
West Virginia	83,633	87,657	84,701	85,451	93,849
Wisconsin	54,365	58,684	61,401	69,106	70,138
Wyoming	7,274	7,866	8,137	8,528	8,047
Total	2,586,033	2,758,774	2,777,483	2,902,753	2,941,525

State	Fuel oil - barrels				
	1921				1922
	September	October	November	December	January
Alabama	7,816	7,789	8,306	10,057	9,878
Arizona	12,888	12,444	11,976	11,854	11,401
Arkansas	18,545	20,685	21,136	22,204	23,166
California	309,570	304,687	355,120	387,125	319,032
Colorado	0	0	0	0	0
Connecticut	2,971	4,085	3,356	2,861	2,086
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	50,732	53,467	57,217	62,065	66,249
Georgia	21,088	23,076	22,785	22,382	19,586
Idaho	0	0	0	0	0
Illinois	181	217	235	225	239
Indiana	587	427	447	506	459
Iowa	947	1,024	1,072	1,291	1,175
Kansas	118,358	112,110	109,820	110,507	115,011
Kentucky	360	538	370	441	433
Louisiana	43,990	41,342	42,067	43,685	42,517
Maine	8,920	9,118	6,170	2,654	4,955
Maryland	30	30	0	0	30
Massachusetts	29,792	31,729	45,185	47,423	49,007
Michigan	134	129	132	131	126
Minnesota	458	455	731	704	1,096
Mississippi	10,846	10,759	11,010	12,835	12,818
Missouri	35,357	37,284	12,155	12,954	11,261
Montana	284	316	256	266	259
Nebraska	11,049	11,897	11,247	19,444	17,654
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	115	121	139	141	136
New Mexico	2,042	1,789	1,782	1,966	1,922
New York	10,322	11,667	12,307	10,054	3,823
North Carolina	100	115	182	180	190
North Dakota	143	143	154	166	120
Ohio	598	604	625	663	126
Oklahoma	57,434	62,339	32,284	37,642	38,814
Oregon	388	772	2,432	3,418	3,636
Pennsylvania	308	107	76	140	154
Rhode Island	109,976	118,057	96,985	96,698	116,736
South Carolina	0	0	0	0	0
South Dakota	2,094	2,134	1,999	2,145	2,027
Tennessee	0	0	0	0	0
Texas	281,586	276,653	255,327	255,526	254,357
Utah	0	0	0	0	0
Vermont	7,409	2,796	83	0	0
Virginia	0	0	0	0	0
Washington	17,923	17,198	17,352	4,139	3,306
West Virginia	0	0	0	0	0
Wisconsin	2,063	1,168	1,201	402	213
Wyoming	1,846	1,986	2,201	5,863	5,050
Total	1,179,250	1,181,457	1,145,922	1,190,757	1,141,051

State	Natural gas - thousands of cubic feet				
	1921				1922
	September	October	November	December	January
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	151,595	166,522	155,717	149,538	141,933
California	395,063	345,256	327,885	228,525	174,874
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	19
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	2,000
Iowa	0	0	0	0	0
Kansas	259,408	257,090	218,093	242,398	223,785
Kentucky	21,300	11,009	7,140	9,373	8,044
Louisiana	106,075	104,688	108,729	112,284	114,192
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	1,000	2,000
Mississippi	0	0	0	0	0
Missouri	1,653	0	2,257	1,203	0
Montana	1,186	1,236	1,295	1,360	1,199
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,305	12,193	11,386	10,809	10,625
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	579,013	521,809	418,159	300,080	162,795
Oklahoma	316,566	293,697	417,310	378,883	353,988
Oregon	0	0	0	0	0
Pennsylvania	135,318	128,554	116,131	133,923	127,176
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	122,933	125,600	131,456	132,828	119,856
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	251,889	279,065	265,291	253,367	187,644
Wisconsin	0	0	0	0	0
Wyoming	30,234	30,571	29,113	4,620	7,051
Total	2,381,628	2,279,880	2,212,562	1,962,781	1,637,771

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that the figures for the last month, and sometimes for the last two months, in the previous report are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most instances.

The curve of total daily output on page 9 for 1921 and 1922 shows a small decrease in the daily rate of production for January, 1922, as compared with December, 1921, indicating that the increase in the rate during the fall and winter reached its maximum in December and that the normal seasonal decrease has apparently begun, which will probably continue during the remainder of the winter and the early part of the spring. A revival in industry and an increase in the number of electric-light customers as the season advances may reduce or entirely eliminate the decrease in output caused by increasing hours of daylight and milder temperatures. It will therefore be of interest to follow the course of the curve of total output as the season advances, for it is believed that any picking up of industry, which is considered by some authorities to be under way at the present time, will be reflected in the rate of daily production of electricity by public-utility plants.

The following tables, which were published in the previous monthly report, are republished here in order to include some slight revisions in the figures for November and December.

Monthly Production of Electricity by Public Utility Plants

1921

	Water Power Kw.-hrs.	Fuel Power Kw.-hrs.	Total Kw.-hrs.
January	1,342,685,000	2,198,804,000	3,541,493,000
February	1,195,527,000	1,970,514,000	3,166,041,000
March	1,345,507,000	2,049,480,000	3,394,987,000
April	1,308,272,000	1,931,199,000	3,239,471,000
May	1,322,201,000	1,941,565,000	3,263,766,000
June	1,215,972,000	2,028,121,000	3,244,093,000
July	1,224,813,000	2,044,896,000	3,269,709,000
August	1,199,995,000	2,210,706,000	3,410,701,000
September	1,101,576,000	2,273,127,000	3,374,703,000
October	1,137,123,000	2,437,216,000	3,574,339,000
November	1,217,833,000	2,421,560,000	3,639,393,000
December	1,312,502,000	2,497,335,000	3,809,837,000
The year	14,924,010,000	26,004,523,000	40,928,533,000

Mean Daily Production of Electricity by Public Utility Plants

1921

	Water Power Kw.-hrs.	Per cent of total	Fuel Power Kw.-hrs.	Per cent of total	Total Kw.-hrs.
January	43,300,000	37.9	70,900,000	62.1	114,200,000
February	42,700,000	37.7	70,800,000	62.3	113,400,000
March	43,400,000	39.6	66,200,000	60.4	109,600,000
April	43,600,000	40.4	64,400,000	59.6	108,000,000
May	42,700,000	40.5	62,600,000	59.5	105,300,000
June	40,500,000	37.4	67,600,000	62.6	108,100,000
July	39,500,000	37.5	66,000,000	62.5	105,500,000
August	38,700,000	35.2	71,300,000	64.8	110,000,000
September	36,700,000	32.6	75,800,000	67.4	112,500,000
October	36,700,000	31.8	78,600,000	68.2	115,300,000
November	40,600,000	33.5	80,700,000	66.5	121,300,000
December	42,300,000	34.5	80,600,000	65.5	122,900,000
The year	40,890,000	36.5	71,250,000	63.5	112,140,000

Monthly Consumption of Fuels by Public Utility Plants

1921

	Coal Tons	Fuel oil Bbls.	Gas M cu. ft.
January	2,984,154	897,088	1,707,413
February	2,629,563	781,436	1,464,682
March	2,641,583	848,866	1,548,664
April	2,416,579	843,193	1,853,783
May	2,415,009	853,519	1,994,126
June	2,434,349	916,033	2,068,248
July	2,453,945	1,026,568	1,929,148
August	2,572,569	1,149,935	2,329,609
September	2,586,033	1,179,250	2,381,628
October	2,758,774	1,131,457	2,279,880
November	2,777,483	1,145,922	2,212,562
December	2,902,753	1,190,757	1,962,781
The year	31,572,799	12,014,079	23,732,524

The annual production of electricity and consumption of fuel by public-utility plants in the United States for the period of record is shown in the following tables:

Year	Production of Electricity: Water Power Kw.-hrs.	Per cent of total	Fuel Power Kw.-hrs.	Per cent of total	Total Kw.-hrs	Change from previous yr. Per cent
1919	14,606,000,000	37.5	24,315,000,000	62.5	38,921,000,000	
1920	16,545,000,000	37.6	27,459,000,000	62.4	44,004,000,000	+13.1
1921	14,924,000,000	36.5	26,005,000,000	63.5	40,929,000,000	- 7.0

Consumption of Fuels

Year	Coal Short tons	Change from previous yr. Per cent	Fuel Oil Barrels	Change from previous yr. Per cent	Gas M cu. ft.	Change from previous yr. Per cent
1919	35,100,000		11,050,000		21,406,000	
1920	37,244,000	+ 6.1	13,123,000	+18.2	24,702,000	+15.4
1921	31,573,000	-15.2	12,014,000	- 8.4	23,733,000	- 3.9

If the oil and gas are converted to equivalent coal and the kilowatt-hours produced by the burning of wood subtracted from the kilowatt-hours produced by fuel power, the rate of consumption of equivalent coal per kilowatt-hour in public-utility plants is found to be as follows: 1919, 3.17 pounds; 1920, 3.07 pounds; and 1921, 2.73 pounds. This indicates a marked increase in efficiency in the consumption of fuel.

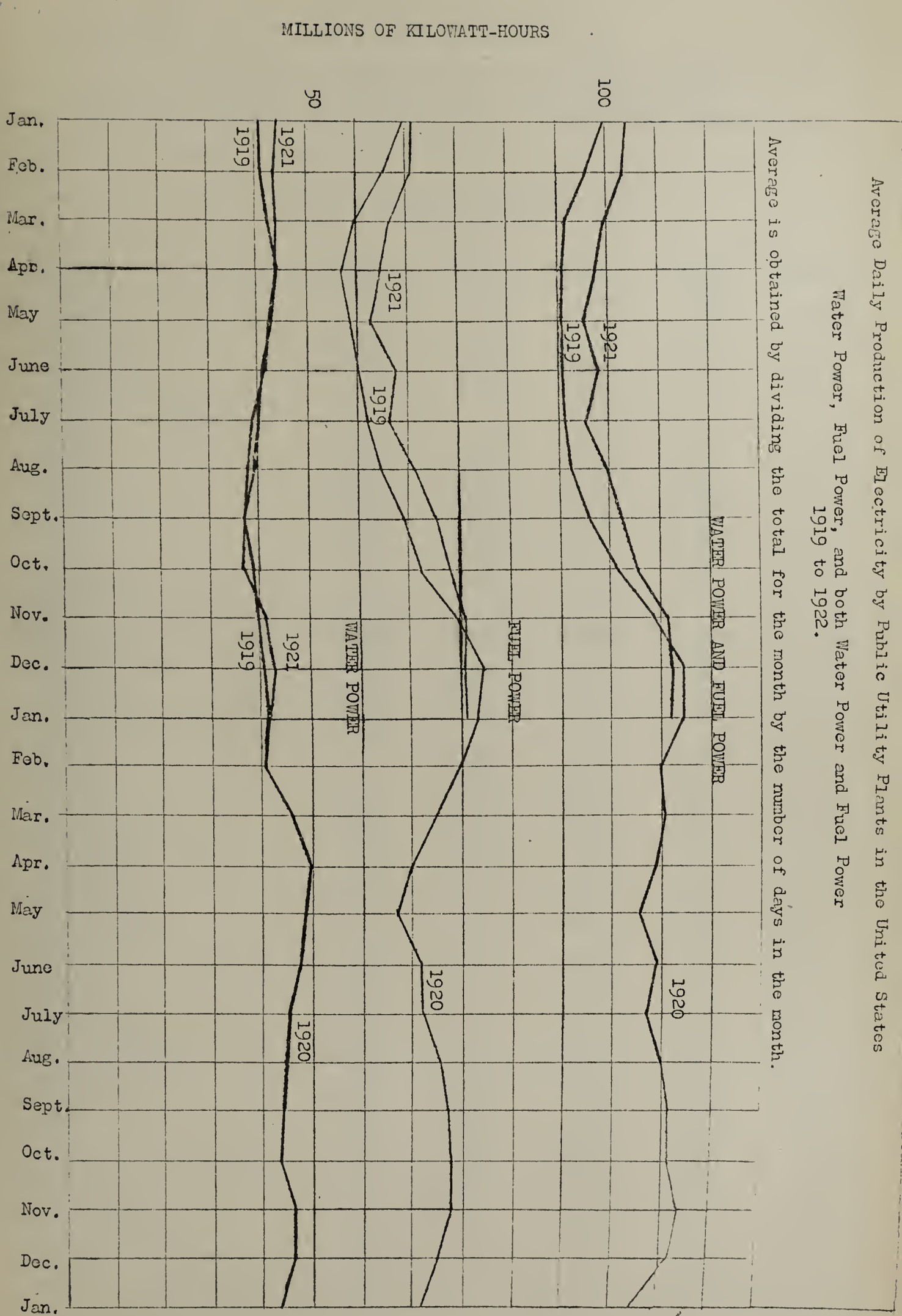
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919 to 1922.

Average is obtained by dividing the total for the month by the number of days in the month.



338705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — March 25, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR OCTOBER, NOVEMBER, AND DECEMBER, 1921, AND JANUARY AND FEBRUARY, 1922

Compiled by
Division of Power Resources, United States Geological Survey

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921			1922	
	October	November	December	January	February
Alabama	15,485	23,863	31,183	38,335	38,154
Arizona	8,759	8,368	5,609	4,593	5,208
Arkansas	133	173	132	144	127
California	254,611	231,133	232,056	254,277	254,662
Colorado	10,728	9,258	14,921	14,786	12,778
Connecticut	3,958	7,956	15,270	8,163	12,446
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	634	907	965	722	659
Georgia	37,636	34,036	38,868	38,837	40,371
Idaho	41,784	43,459	49,020	47,503	42,003
Illinois	16,233	16,247	15,984	15,045	13,950
Indiana	3,967	4,162	5,318	4,863	4,732
Iowa	54,925	54,935	53,859	51,240	45,470
Kansas	1,103	1,029	1,070	1,018	1,366
Kentucky	10	10	10	10	10
Louisiana	0	0	0	0	0
Maine	27,681	30,300	31,973	31,133	27,385
Maryland	104	194	260	243	293
Massachusetts	14,044	24,746	29,935	25,595	23,983
Michigan	58,247	56,860	64,474	52,571	46,920
Minnesota	29,702	25,843	26,508	20,421	15,169
Mississippi	0	0	0	0	0
Missouri	377	1,400	2,182	2,358	2,316
Montana	48,044	47,760	49,174	55,359	60,560
Nebraska	1,423	1,175	1,082	1,200	1,206
Nevada	3,173	3,138	3,201	3,221	3,011
New Hampshire	5,669	12,803	14,942	10,275	9,622
New Jersey	77	140	244	154	193
New Mexico	66	74	68	62	52
New York	179,836	206,135	237,566	225,928	210,307
North Carolina	22,859	27,003	25,334	21,493	21,034
North Dakota	0	0	0	0	0
Ohio	1,646	3,415	3,866	3,098	3,285
Oklahoma	120	127	152	155	97
Oregon	27,353	29,047	33,902	35,414	32,326
Pennsylvania	32,922	47,726	54,088	47,317	49,382
Rhode Island	121	197	622	357	542
South Carolina	58,502	71,433	72,555	76,453	76,200
South Dakota	814	678	554	514	468
Tennessee	27,557	31,009	31,333	31,130	27,766
Texas	237	375	432	432	389
Utah	5,139	4,674	4,776	3,931	3,470
Vermont	8,010	9,201	9,798	9,453	8,884
Virginia	5,133	14,105	17,328	17,657	19,692
Washington	95,562	101,756	107,225	107,821	89,801
West Virginia	820	1,764	2,739	2,404	2,582
Wisconsin	32,761	28,975	31,334	26,488	24,788
Wyoming	150	154	139	154	134
Total	1,137,123	1,217,833	1,322,101	1,292,727	1,233,888

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1921			1922	
	October	November	December	January	February
Alabama	23,842	19,348	12,897	9,434	4,226
Arizona	2,864	2,675	2,762	2,816	2,857
Arkansas	11,095	10,646	10,765	10,664	9,546
California	74,748	88,813	89,342	57,912	46,440
Colorado	21,013	21,788	18,738	19,328	17,288
Connecticut	52,669	50,794	45,653	51,440	43,222
Delaware	6,348	6,552	7,146	7,018	6,428
District of Columbia	21,838	22,716	24,884	24,351	21,253
Florida	11,298	11,953	13,673	13,726	12,768
Georgia	11,690	9,723	7,446	6,995	6,664
Idaho	339	131	116	156	135
Illinois	246,304	259,982	282,444	279,842	253,492
Indiana	77,386	77,476	80,141	79,156	74,466
Iowa	32,204	33,299	35,108	35,518	31,186
Kansas	38,627	37,825	37,862	38,514	35,209
Kentucky	25,545	25,404	26,430	26,755	24,715
Louisiana	19,685	19,684	21,216	21,382	18,490
Maine	4,766	2,602	696	1,877	2,196
Maryland	31,514	18,886	19,087	24,423	17,449
Massachusetts	128,881	124,010	127,697	137,730	121,475
Michigan	113,292	111,803	107,012	114,633	109,000
Minnesota	39,521	43,670	44,689	51,826	45,893
Mississippi	5,483	5,520	5,363	5,208	4,844
Missouri	63,032	63,828	67,018	67,523	62,377
Montana	687	685	777	742	583
Nebraska	22,299	21,484	22,637	21,718	19,751
Nevada	24	28	31	124	93
New Hampshire	3,746	3,258	3,718	3,636	2,876
New Jersey	84,749	89,480	96,705	95,394	83,358
New Mexico	1,290	1,298	1,368	1,358	1,212
New York	360,295	355,958	380,843	389,956	336,723
North Carolina	9,061	5,257	4,327	5,687	5,303
North Dakota	2,916	3,044	3,171	2,936	2,513
Ohio	221,186	223,574	228,116	228,785	213,093
Oklahoma	18,687	18,325	18,548	21,689	19,416
Oregon	14,585	13,504	10,401	8,769	7,813
Pennsylvania	307,197	310,045	332,327	325,032	297,217
Rhode Island	43,261	35,671	34,555	41,931	36,073
South Carolina	5,691	4,823	4,854	4,529	3,944
South Dakota	3,774	3,905	4,335	4,221	3,767
Tennessee	12,091	11,322	11,829	11,500	10,049
Texas	66,702	63,330	63,955	64,622	56,769
Utah	0	0	14	22	25
Vermont	566	29	19	71	95
Virginia	40,976	34,647	32,734	32,783	26,805
Washington	5,479	4,422	2,297	3,865	6,416
West Virginia	98,071	97,636	99,070	101,624	96,023
Wisconsin	46,654	47,337	49,334	49,836	46,188
Wyoming	3,245	3,370	3,441	3,434	3,078
Total	2,437,216	2,421,560	2,497,591	2,512,491	2,250,802
Total by water power	1,137,123	1,217,833	1,322,101	1,292,727	1,233,888
Total by water power and fuels	3,574,339	3,639,393	3,819,692	3,805,218	3,484,690

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during February, 1922, are as follows: Alabama, 33,000; Arkansas, 197,000; Florida, 442,000; Georgia, 537,000; Louisiana, 97,000; Michigan, 65,000; Minnesota, 467,000; Mississippi, 651,000; Oregon, 7,407,000; South Carolina, 45,000; Texas, 158,000; Washington, 1,332,000; Wisconsin, 360,000; and all other States (Arizona, California, Idaho, Maine, New Mexico, and Oklahoma), 921,000.

Electric power produced during October, November, and December, 1921, and January and February, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921			1922	
	October	November	December	January	February
Alabama	28,023	22,399	16,993	13,466	6,735
Arizona	0	0	0	0	331
Arkansas	9,446	9,586	10,903	9,277	8,501
California	0	0	0	0	0
Colorado	35,910	36,872	33,122	32,565	29,240
Connecticut	67,265	64,223	60,389	69,742	57,777
Delaware	7,578	7,845	8,386	8,768	7,724
District of Columbia	19,163	19,392	21,077	20,577	18,062
Florida	1,898	1,868	1,897	1,823	1,577
Georgia	15,433	12,539	8,733	8,781	7,138
Idaho	0	0	0	0	0
Illinois	335,870	357,043	393,114	389,387	349,170
Indiana	161,517	166,893	167,597	166,395	149,657
Iowa	71,987	78,366	81,600	82,711	73,417
Kansas	19,188	19,505	19,373	20,762	16,524
Kentucky	41,239	41,700	42,748	42,916	39,460
Louisiana	9,844	9,772	10,457	10,501	9,561
Maine	4,354	2,104	942	1,541	1,716
Maryland	32,194	19,946	20,337	25,196	18,724
Massachusetts	120,804	116,284	129,294	132,441	121,869
Michigan	119,325	117,436	114,209	120,451	110,901
Minnesota	49,145	56,218	60,775	69,553	60,910
Mississippi	9,615	9,262	9,165	9,293	8,026
Missouri	86,442	98,109	107,217	107,270	96,110
Montana	3,610	3,732	3,835	3,744	3,565
Nebraska	36,039	36,032	36,185	35,767	31,684
Nevada	134	154	171	193	154
New Hampshire	5,200	4,459	5,138	4,577	3,677
New Jersey	99,731	111,504	122,214	116,914	99,551
New Mexico	2,785	2,677	3,206	3,343	2,933
New York	390,085	381,806	400,600	412,517	354,870
North Carolina	16,592	10,686	8,800	10,924	10,309
North Dakota	13,581	15,906	16,397	15,995	14,111
Ohio	263,485	269,548	279,739	290,171	254,532
Oklahoma	6,432	7,047	8,119	7,465	5,418
Oregon	135	145	150	135	120
Pennsylvania	393,810	397,543	426,466	425,924	371,661
Rhode Island	10,911	11,495	10,379	11,428	10,935
South Carolina	10,361	8,996	8,486	8,494	7,604
South Dakota	7,585	7,801	8,975	8,094	7,403
Tennessee	22,686	21,405	21,849	20,911	17,779
Texas	18,497	18,220	17,281	21,319	16,342
Utah	0	0	40	40	42
Vermont	596	106	121	172	150
Virginia	53,717	44,386	40,378	39,456	32,450
Washington	2,355	2,229	2,905	3,061	3,555
West Virginia	87,657	84,701	85,451	93,554	86,392
Wisconsin	58,684	61,401	69,106	68,439	63,611
Wyoming	7,866	8,137	8,528	8,047	7,356
Total	2,758,774	2,777,483	2,902,987	2,954,100	2,599,374

State	Fuel oil - barrels				
	1921			1922	
	October	November	December	January	February
Alabama	7,989	8,306	10,057	9,878	9,422
Arizona	12,444	11,976	11,854	11,922	11,634
Arkansas	20,885	21,136	22,204	20,607	18,540
California	304,687	355,120	387,125	269,732	234,258
Colorado	0	0	0	0	0
Connecticut	4,085	3,356	2,861	2,086	1,918
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	53,467	57,217	62,065	66,511	62,434
Georgia	23,076	22,785	22,382	19,586	19,212
Idaho	0	0	0	0	0
Illinois	217	235	225	239	210
Indiana	427	447	506	459	387
Iowa	1,024	1,072	1,291	1,163	1,148
Kansas	112,110	109,820	110,507	117,418	102,469
Kentucky	538	370	441	459	607
Louisiana	41,342	42,067	43,685	41,700	43,620
Maine	9,118	6,170	2,654	4,957	2,693
Maryland	30	0	0	0	0
Massachusetts	31,729	45,185	47,423	49,007	45,866
Michigan	129	132	131	126	97
Minnesota	455	731	704	1,096	720
Mississippi	10,759	11,010	12,835	12,833	12,289
Missouri	37,284	12,155	12,954	11,256	13,164
Montana	316	256	266	255	254
Nebraska	11,897	11,247	19,444	17,649	15,695
Nevada	0	0	0	286	183
New Hampshire	0	0	0	0	0
New Jersey	121	139	141	136	124
New Mexico	1,789	1,782	1,966	1,922	1,915
New York	11,667	12,307	10,054	3,933	5,707
North Carolina	115	182	180	190	200
North Dakota	143	154	166	120	305
Ohio	604	625	663	126	119
Oklahoma	62,339	32,284	37,642	51,589	46,706
Oregon	772	2,432	3,418	3,636	1,456
Pennsylvania	107	76	140	154	152
Rhode Island	118,057	96,985	96,698	117,311	101,224
South Carolina	0	0	0	50	50
South Dakota	2,134	1,999	2,497	2,381	1,957
Tennessee	0	0	0	0	0
Texas	276,653	255,327	256,169	255,581	219,521
Utah	0	0	0	0	0
Vermont	2,796	83	0	95	300
Virginia	0	0	0	0	0
Washington	17,198	17,352	4,139	8,855	16,050
West Virginia	0	0	0	16	16
Wisconsin	1,168	1,201	402	216	201
Wyoming	1,986	2,201	5,863	5,050	5,348
Total	1,181,457	1,145,922	1,191,752	1,110,586	998,671

State	Natural gas - thousands of cubic feet				
	1921			1922	
	October	November	December	January	February
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	166,522	155,717	149,538	137,556	125,731
California	345,256	327,835	228,525	174,874	95,012
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	19	10
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	2,000	1,876
Iowa	0	0	0	0	0
Kansas	257,090	218,098	242,398	223,785	240,766
Kentucky	11,009	7,140	9,373	8,044	7,013
Louisiana	104,688	108,729	112,264	114,192	119,854
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	1,000	2,000	0
Mississippi	0	0	0	0	0
Missouri	0	2,357	1,203	0	1,223
Montana	1,236	1,295	1,360	1,199	1,035
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	12,193	11,386	10,809	10,625	11,951
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	521,809	418,159	300,080	161,204	215,254
Oklahoma	293,697	417,310	378,883	353,793	349,258
Oregon	0	0	0	0	0
Pennsylvania	128,554	116,131	133,923	130,078	95,145
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	125,600	131,456	132,828	119,407	155,099
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	279,065	265,291	253,367	189,839	174,970
Wisconsin	0	0	0	0	0
Wyoming	30,571	29,118	4,620	7,051	5,400
Total	2,279,830	2,212,562	1,962,781	1,636,256	1,600,187

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that the figures for the last month, and sometimes for the last two months, in the previous report are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most instances.

The mean daily production of electricity in kilowatt-hours by public utility plants for the latter part of 1921 and the first part of 1922 was as follows: November, 121,300,000; December, 123,200,000; January, 122,750,000; and February, 124,450,000. The amount produced by water power was 33.5, 34.6, 34.0, and 35.4 per cent respectively. An examination of the curves on page 7 shows that there was a decided increase in the average daily total production of electricity by public utility plants during February. This increase apparently indicates that the demand for electricity is increasing to such an extent as to more than counteract the normal seasonal decrease in the use of electricity which generally occurs during the early months of each year. Undoubtedly a large part of the increase in the production of electricity during the latter half of 1921 was due to the increase in the demand for electricity for commercial lighting and domestic use. One large public utility company reported that the increase in the use of electricity for domestic purposes during 1921 was the largest ever experienced in the company's history. The demand for electricity for commercial and domestic use will probably continue to increase and with the increase in the demand due to improving industrial conditions the production of electricity in 1922 will probably exceed that for any previous year unless the approaching coal strike continues long enough to thoroughly demoralize industry and business. Electric public utility companies on March 1 had sufficient coal to last about 54 days based on the rate of consumption for January and February. Stocks undoubtedly have been increased during March and at present the stock of coal available for the use of electric public utilities would, if evenly divided, last from 2 to 3 months. Unfortunately the supply is not evenly divided and some companies will suffer from lack of coal if the strike continues for some time.

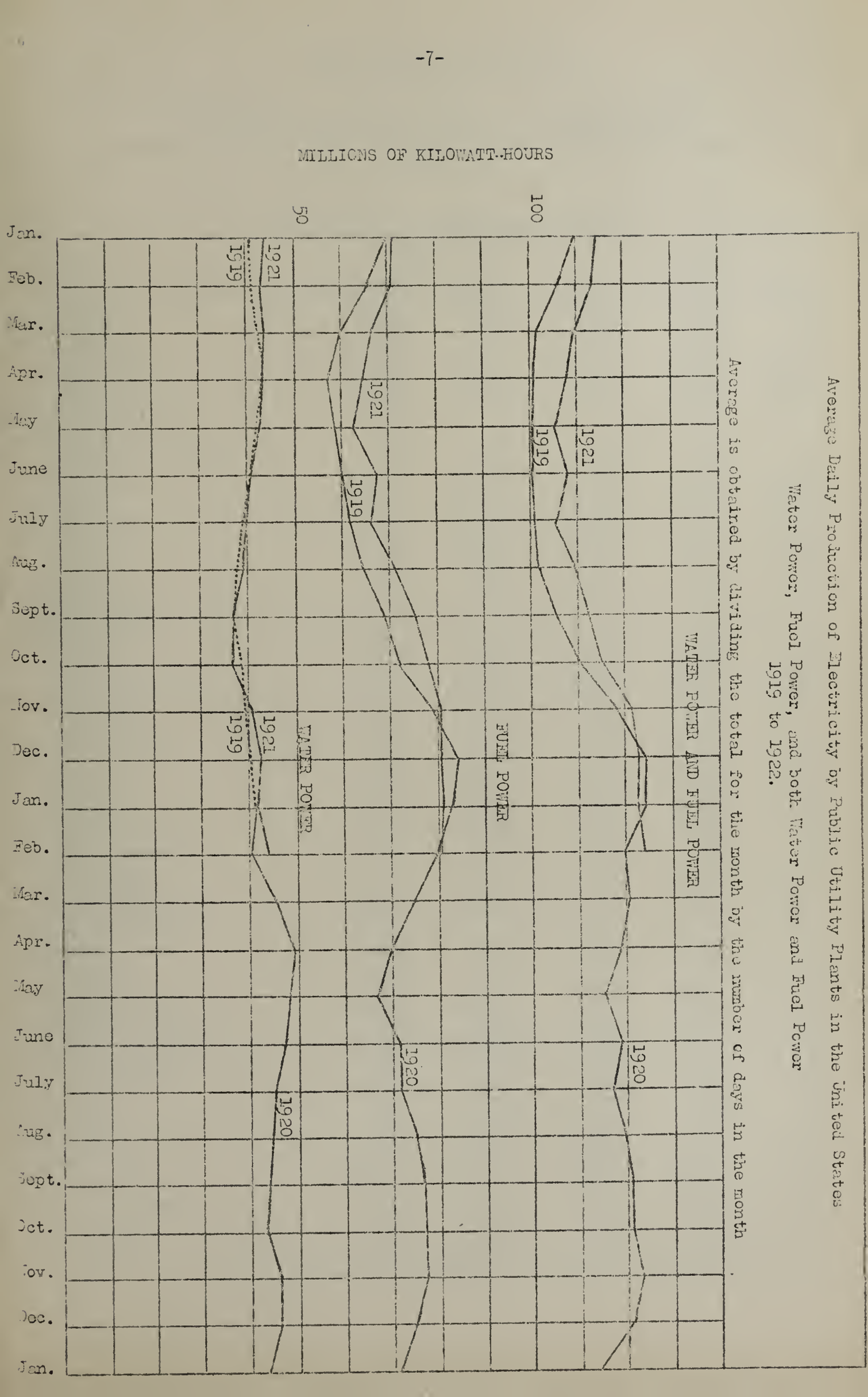
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919 to 1922.

Average is obtained by dividing the total for the month by the number of days in the month



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — April 28, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR NOVEMBER AND DECEMBER, 1921, AND JANUARY, FEBRUARY, AND MARCH, 1922

Compiled by
Division of Power Resources, United States Geological Survey

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921		1922		
	November	December	January	February	March
Alabama	23,863	31,103	38,235	38,154	42,539
Arizona	8,368	5,609	4,593	5,208	8,630
Arkansas	173	132	144	127	136
California	231,133	232,056	254,629	240,360	278,230
Colorado	9,258	14,921	14,762	12,765	13,780
Connecticut	7,956	15,270	8,163	12,446	22,715
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	907	965	722	659	617
Georgia	34,036	38,863	38,837	40,371	45,224
Idaho	43,459	49,020	47,503	41,976	44,199
Illinois	16,247	15,984	15,045	13,950	14,922
Indiana	4,162	5,318	4,374	4,743	4,291
Iowa	54,935	53,859	51,240	45,470	56,041
Kansas	1,029	1,070	1,018	1,366	1,439
Kentucky	10	10	10	10	0
Louisiana	0	0	0	0	0
Maine	30,300	31,973	31,133	27,385	32,607
Maryland	194	260	243	293	383
Massachusetts	24,746	29,935	25,595	23,983	37,926
Michigan	56,860	64,474	52,571	46,916	61,683
Minnesota	25,843	26,508	20,421	15,169	28,010
Mississippi	0	0	0	0	0
Missouri	1,400	2,182	2,358	2,316	6,847
Montana	47,760	49,174	55,359	63,650	71,556
Nebraska	1,175	1,082	1,220	1,234	1,393
Nevada	3,138	3,201	3,221	3,927	3,403
New Hampshire	12,803	14,942	10,275	9,622	19,124
New Jersey	140	244	154	194	224
New Mexico	74	68	62	52	65
New York	206,135	237,566	225,934	212,718	235,130
North Carolina	27,093	25,334	21,505	20,076	22,953
North Dakota	0	0	0	0	0
Ohio	3,415	3,866	3,093	3,285	3,998
Oklahoma	127	152	155	97	220
Oregon	29,047	33,902	35,414	31,941	34,225
Pennsylvania	47,726	54,088	47,317	49,664	56,488
Rhode Island	197	622	357	542	853
South Carolina	71,433	72,555	76,453	72,315	73,523
South Dakota	678	554	514	468	1,237
Tennessee	31,009	31,333	31,192	27,747	29,604
Texas	375	432	432	389	369
Utah	4,674	4,776	3,931	3,465	3,532
Vermont	9,201	9,798	9,681	9,175	10,805
Virginia	14,105	17,328	17,702	19,848	26,248
Washington	101,756	107,225	107,321	90,047	92,641
West Virginia	1,764	2,739	2,404	2,582	2,904
Wisconsin	28,975	31,334	26,480	24,764	46,978
Wyoming	154	189	154	134	118
Total	1,217,833	1,322,101	1,293,439	1,221,108	1,437,810

THOUSANDS OF KILOWATT-HOURS PRODUCED

BY FUELS

State	1921		1922		
	November	December	January	February	March
Alabama	19,348	12,897	9,298	3,899	4,438
Arizona	2,675	2,762	2,816	2,766	2,711
Arkansas	10,646	10,765	10,664	9,449	9,536
California	88,813	89,342	57,928	48,674	38,210
Colorado	21,788	18,738	19,337	17,283	17,620
Connecticut	50,794	45,653	51,375	43,131	42,908
Delaware	6,552	7,146	7,018	6,428	6,696
District of Columbia	22,716	24,884	24,351	21,253	22,870
Florida	11,953	13,673	13,831	12,887	13,563
Georgia	9,723	7,446	6,995	6,664	7,431
Idaho	131	116	156	135	6
Illinois	259,982	282,444	279,842	253,273	274,107
Indiana	77,476	80,141	79,147	73,827	79,358
Iowa	33,299	35,108	35,513	31,159	32,921
Kansas	37,825	37,862	38,514	35,185	31,859
Kentucky	25,404	26,430	26,782	24,690	27,110
Louisiana	19,684	21,216	21,382	18,490	20,349
Maine	2,602	696	1,877	2,196	549
Maryland	18,836	19,087	24,423	17,449	18,515
Massachusetts	124,010	127,697	137,665	120,202	117,250
Michigan	111,803	107,012	114,640	103,989	102,102
Minnesota	43,670	44,689	51,877	45,862	31,729
Mississippi	5,520	5,363	5,208	4,677	4,864
Missouri	63,828	67,018	67,508	62,171	62,950
Montana	685	777	782	671	663
Nebraska	21,484	22,637	21,752	19,723	21,574
Nevada	28	31	124	93	90
New Hampshire	3,258	3,718	3,636	2,876	2,132
New Jersey	89,480	96,705	95,299	83,285	90,449
New Mexico	1,298	1,368	1,358	1,219	1,365
New York	355,958	380,843	389,969	336,665	358,573
North Carolina	5,257	4,327	6,255	5,175	4,768
North Dakota	3,044	3,171	2,935	2,512	2,488
Ohio	223,574	228,116	228,956	213,475	236,573
Oklahoma	18,325	18,548	21,716	19,322	20,518
Oregon	13,504	10,401	8,770	7,807	7,643
Pennsylvania	310,045	332,327	324,167	295,061	329,055
Rhode Island	35,671	34,555	41,931	36,073	26,738
South Carolina	4,823	4,854	4,529	3,946	4,032
South Dakota	3,905	4,335	4,221	3,690	3,260
Tennessee	11,322	11,829	11,502	10,045	11,240
Texas	63,330	63,955	64,604	56,695	59,994
Utah	0	14	22	25	25
Vermont	29	19	71	95	17
Virginia	34,647	32,734	32,783	26,831	24,976
Washington	4,422	2,297	3,865	6,350	12,297
West Virginia	97,636	99,070	101,624	96,046	111,254
Wisconsin	47,337	49,334	49,859	45,366	43,884
Wyoming	3,370	3,441	3,427	3,054	3,066
Total	2,421,560	2,497,591	2,512,309	2,246,839	2,346,326
Total by water power	1,217,833	1,322,101	1,293,439	1,221,108	1,437,810
Total by water power and fuels	3,639,393	3,819,692	3,805,748	3,467,947	3,784,136

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during March, 1922, are as follows: Alabama, 36,000; Arkansas, 424,000; Florida, 473,000; Georgia, 537,000; Louisiana, 129,000; Michigan, 64,000; Minnesota, 375,000; Mississippi, 684,000; Oregon, 7,501,000; South Carolina, 62,000; Texas, 166,000; Washington, 1,369,000; Wisconsin, 424,000; and all other States (Arizona, California, Idaho, Maine, New Mexico, and Oklahoma), 773,000.

Electric power produced during November and December, 1921, and January, February, and March, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921		1922		
	November	December	January	February	March
Alabama	22,399	16,993	14,061	7,489	8,494
Arizona	0	0	0	331	0
Arkansas	9,586	10,903	9,277	8,587	8,911
California	0	0	0	0	0
Colorado	36,872	33,122	32,602	29,247	32,123
Connecticut	64,223	60,389	69,692	58,354	56,046
Delaware	7,845	8,386	8,768	7,724	8,073
District of Columbia	19,392	21,077	20,577	18,062	19,164
Florida	1,868	1,897	1,823	1,577	1,696
Georgia	12,539	8,733	8,781	7,138	8,020
Idaho	0	0	0	0	0
Illinois	357,043	393,114	389,387	347,937	372,370
Indiana	166,898	167,597	166,332	148,107	157,946
Iowa	78,366	81,600	82,711	73,417	73,616
Kansas	19,505	19,373	20,762	16,504	15,606
Kentucky	41,700	42,748	43,051	39,417	43,249
Louisiana	9,772	10,457	10,501	9,561	11,311
Maine	2,104	942	1,541	1,716	242
Maryland	19,946	20,337	25,196	18,724	20,230
Massachusetts	116,284	129,294	132,452	120,819	115,130
Michigan	117,436	114,209	120,480	110,894	105,937
Minnesota	56,218	60,775	69,720	61,119	45,513
Mississippi	9,262	9,165	9,293	8,026	8,557
Missouri	98,109	107,217	107,102	96,565	97,610
Montana	3,732	3,835	3,743	3,713	1,079
Nebraska	36,032	36,185	35,899	31,654	33,319
Nevada	154	171	193	154	150
New Hampshire	4,459	5,138	4,577	3,677	2,632
New Jersey	111,504	122,214	116,774	99,389	104,731
New Mexico	2,677	3,296	3,343	2,928	3,247
New York	381,806	400,600	412,536	354,565	368,709
North Carolina	10,686	8,800	11,125	9,409	8,566
North Dakota	15,906	16,397	15,995	14,111	13,298
Ohio	269,548	279,739	290,412	254,971	268,108
Oklahoma	7,047	8,119	7,595	5,598	5,697
Oregon	145	150	135	120	132
Pennsylvania	397,543	426,466	424,299	370,031	415,701
Rhode Island	11,495	10,379	11,428	10,935	9,593
South Carolina	8,996	8,486	8,494	7,629	7,794
South Dakota	7,801	8,975	8,094	7,334	7,510
Tennessee	21,405	21,849	20,931	17,779	19,304
Texas	18,220	17,281	20,561	15,491	16,245
Utah	0	40	40	42	40
Vermont	106	121	172	150	45
Virginia	44,386	40,378	39,456	32,934	33,003
Washington	2,229	2,905	3,061	3,608	10,623
West Virginia	84,701	85,451	93,554	86,475	100,086
Wisconsin	61,401	69,106	68,916	63,493	63,285
Wyoming	8,137	8,528	8,098	7,300	7,400
Total	2,777,483	2,902,987	2,953,540	2,594,805	2,710,141

State	Fuel oil - barrels				
	1921		1922		
	November	December	January	February	March
Alabama	8,306	10,057	5,618	4,409	5,325
Arizona	11,976	11,854	11,922	11,638	11,785
Arkansas	21,136	22,204	20,607	18,546	15,854
California	355,120	387,125	269,705	236,492	217,053
Colorado	0	0	0	0	0
Connecticut	3,356	2,861	2,086	1,918	2,070
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	57,217	62,065	67,484	63,800	65,547
Georgia	22,785	22,382	19,586	19,212	21,277
Idaho	0	0	0	0	0
Illinois	235	225	239	210	234
Indiana	447	506	459	387	435
Iowa	1,072	1,291	1,163	1,148	1,096
Kansas	109,820	110,507	117,418	102,289	101,034
Kentucky	370	441	459	519	623
Louisiana	42,067	43,635	41,700	43,620	47,159
Maine	6,170	2,654	4,957	2,693	163
Maryland	0	0	0	0	0
Massachusetts	45,185	47,423	48,618	43,395	43,418
Michigan	132	131	126	97	113
Minnesota	731	704	1,096	720	536
Mississippi	11,010	12,835	12,833	11,309	11,683
Missouri	12,155	12,954	11,401	13,294	9,345
Montana	256	266	331	307	0
Nebraska	11,247	19,444	17,722	15,706	16,087
Nevada	0	0	286	183	275
New Hampshire	0	0	0	0	0
New Jersey	139	141	136	124	136
New Mexico	1,782	1,966	1,922	1,924	2,186
New York	12,307	10,054	3,933	5,707	7,620
North Carolina	182	180	190	200	206
North Dakota	154	166	120	305	166
Ohio	625	663	384	362	369
Oklahoma	32,284	37,642	51,684	47,607	48,490
Oregon	2,432	3,418	3,636	1,456	733
Pennsylvania	76	140	154	152	198
Rhode Island	96,985	96,698	117,311	101,224	77,269
South Carolina	0	0	50	50	50
South Dakota	1,999	2,497	2,381	1,891	2,168
Tennessee	0	0	0	0	0
Texas	255,327	256,169	256,108	219,716	237,021
Utah	0	0	0	0	0
Vermont	83	0	95	300	0
Virginia	0	0	0	0	0
Washington	17,352	4,139	8,855	16,050	23,801
West Virginia	0	0	16	16	16
Wisconsin	1,201	402	216	201	204
Wyoming	2,201	5,063	5,406	5,846	5,971
Total	1,145,922	1,191,752	1,108,413	995,025	977,716

State	Natural gas - thousands of cubic feet				
	1921		1922		
	November	December	January	February	March
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	155,717	149,538	137,556	125,370	118,130
California	327,885	228,525	174,874	98,795	20,370
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	19	10	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	2,000	1,876	2,445
Iowa	0	0	0	0	0
Kansas	218,098	242,398	223,785	246,726	214,771
Kentucky	7,140	9,373	8,044	6,878	7,230
Louisiana	108,729	112,284	114,192	119,854	103,017
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	1,000	2,000	0	172
Mississippi	0	0	0	0	0
Missouri	2,257	1,203	0	1,223	2,635
Montana	1,295	1,360	1,199	1,035	0
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	11,386	10,809	10,625	11,951	12,978
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	418,159	300,080	161,204	215,189	282,905
Oklahoma	417,310	378,883	351,938	342,820	392,759
Oregon	0	0	0	0	0
Pennsylvania	116,131	133,923	130,078	94,780	105,334
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	131,456	132,828	119,407	152,099	155,220
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	265,291	253,367	189,839	174,970	185,813
Wisconsin	0	0	0	0	0
Wyoming	28,118	4,620	6,695	5,400	5,518
Total	2,212,562	1,962,731	1,633,926	1,599,566	1,609,387

The average daily production of electricity in kilowatt-hours by electric public utility plants in March was less than that for February by a little more than one per cent. The average monthly output for each of the past five months is as follows: November, 121,300,000; December, 123,200,000; January, 125,200,000; February, 123,800,000; and March, 122,500,000. These figures show that there has been but little change in the average daily production of electricity by public utility plants since November, 1921, and indicate as was pointed out in last month's report that the normal seasonal decrease in output during the late winter and early spring months is apparently being replaced by an increase in the demand for electricity. This is perhaps more plainly shown by an examination of the curves of daily production of electricity on page 7. The curves of total mean daily output for 1919, 1920, and 1921 show a marked decrease in output from January to March while the curve for 1922 shows practically no change for the same period.

The effect of the coal strike upon the production of electricity by public utility plants will be indicated in the report covering the month of April, which will be published the latter part of May. During March electric public utility power plants consumed 2,700,000 tons of coal in producing electricity. This amount of coal is equivalent to 87,000 tons per day or 1,740 carloads of 50 tons per car every 24 hours..

The increase in the water supply at water-power plants is shown by the increase from 33.5 per cent in November to 38.0 per cent in March in the proportion of the total output produced by water power.

The curves on page 7 show the average daily production of electricity by water power, fuel power, and by both fuel and water power in electric public utility plants from January, 1919, to March, 1922.

The quantities in the tables are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants which contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants which do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that the figures for the last month, and sometimes for the last two months, in the previous report are revised in the latest report, due to the receipt of data after publication. The revision, however, is small in most instances.

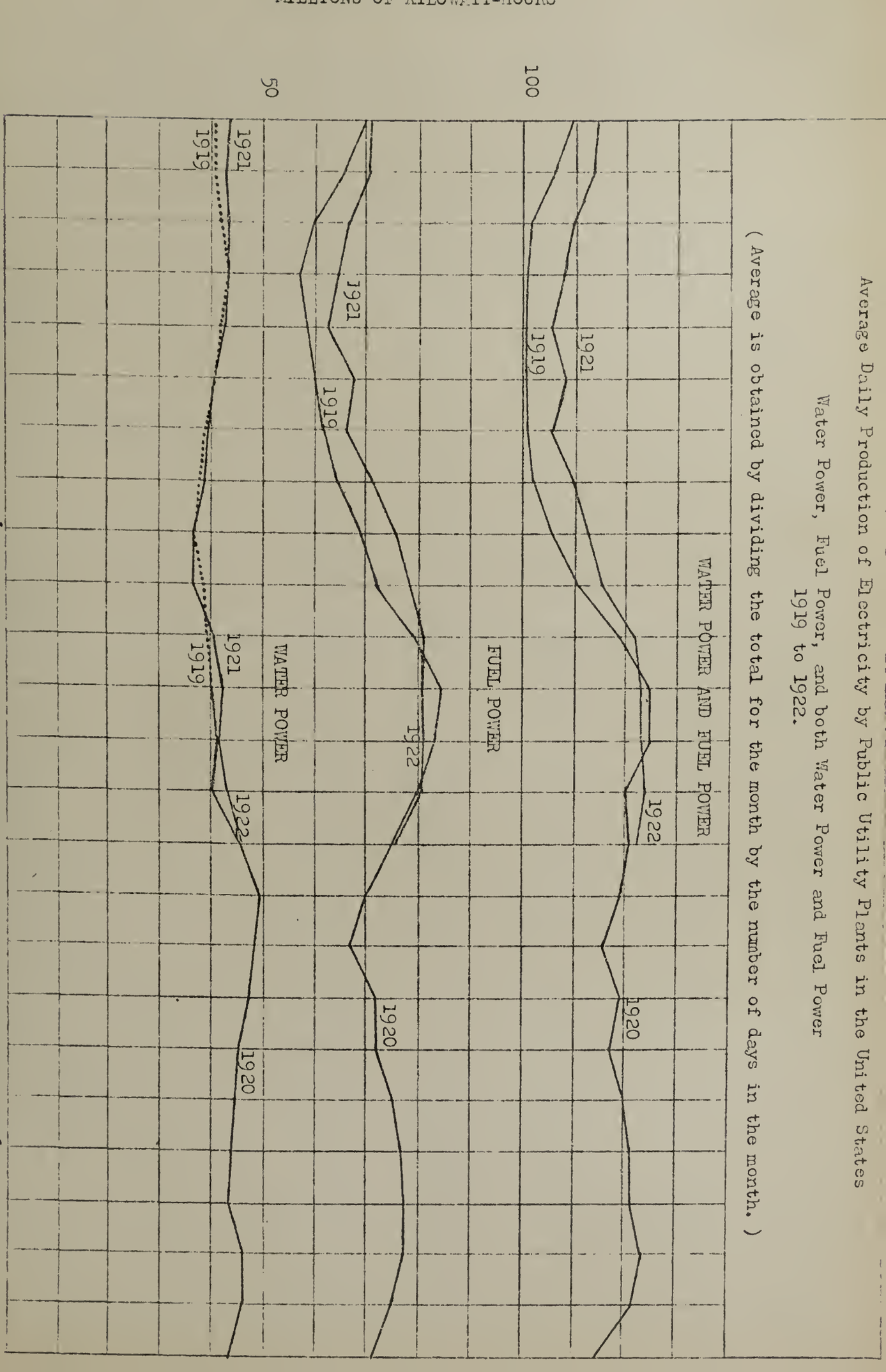
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in the United States

Water Power, Fuel Power, and both Water Power and Fuel Power
1919 to 1922.

(Average is obtained by dividing the total for the month by the number of days in the month.)



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

May 25, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR DECEMBER, 1921, AND JANUARY, FEBRUARY, MARCH, AND APRIL, 1922

Compiled by
Division of Power Resources, United States Geological Survey

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1921	1922			
	December	January	February	March	April
Alabama	31,183	38,235	38,154	42,339	41,625
Arizona	5,609	4,593	5,208	8,630	8,538
Arkansas	132	144	127	136	120
California	232,056	254,629	240,360	291,584	298,115
Colorado	14,921	14,762	12,765	13,846	14,828
Connecticut	15,270	8,163	12,446	19,448	18,621
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	965	722	659	617	603
Georgia	38,868	38,837	40,371	45,224	42,205
Idaho	49,020	47,503	41,976	44,199	45,805
Illinois	15,934	15,045	13,950	15,328	13,238
Indiana	5,318	4,874	4,743	5,978	5,251
Iowa	53,859	51,240	45,470	56,041	54,413
Kansas	1,070	1,018	1,366	2,349	2,317
Kentucky	10	10	10	8	8
Louisiana	0	0	0	0	0
Maine	31,973	31,133	27,385	32,607	27,520
Maryland	260	243	298	383	317
Massachusetts	29,935	25,595	23,983	38,148	41,316
Michigan	64,474	52,571	46,916	63,427	65,125
Minnesota	26,508	20,421	15,169	28,010	36,994
Mississippi	0	0	0	0	0
Missouri	2,182	2,358	2,316	6,847	6,643
Montana	49,174	55,359	63,650	80,790	81,178
Nebraska	1,082	1,220	1,233	1,397	1,440
Nevada	3,201	3,221	2,927	3,370	3,252
New Hampshire	14,942	10,275	9,622	19,119	15,908
New Jersey	244	154	194	224	219
New Mexico	68	62	52	65	53
New York	237,566	225,934	212,793	235,164	236,879
North Carolina	25,334	21,505	20,076	23,127	23,224
North Dakota	0	0	0	0	0
Ohio	3,866	3,098	3,285	3,998	3,770
Oklahoma	152	155	97	220	197
Oregon	33,902	35,414	31,925	34,889	33,243
Pennsylvania	54,088	47,817	49,664	56,490	54,875
Rhode Island	622	357	542	853	938
South Carolina	72,555	76,453	72,815	75,490	75,250
South Dakota	554	514	468	1,300	1,776
Tennessee	31,333	31,192	27,747	29,571	25,744
Texas	432	432	389	369	355
Utah	4,776	3,931	3,465	3,410	3,415
Vermont	9,798	9,681	9,175	10,986	13,100
Virginia	17,323	17,702	19,848	27,236	21,635
Washington	107,225	107,321	90,047	92,463	90,690
West Virginia	2,739	2,404	2,582	2,904	2,844
Wisconsin	31,334	26,488	24,515	48,167	51,351
Wyoming	189	154	134	118	133
Total	1,322,101	1,293,439	1,220,922	1,467,059	1,465,071

State	THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS				
	1921	1922			
	December	January	February	March	April
Alabama	12,897	9,298	3,899	4,430	4,544
Arizona	2,762	2,816	2,796	2,730	2,666
Arkansas	10,765	10,664	9,449	9,470	8,902
California	89,342	57,928	48,674	29,868	26,864
Colorado	18,738	19,337	17,283	17,620	15,404
Connecticut	45,653	51,375	43,131	42,843	36,176
Delaware	7,146	7,018	6,428	6,696	6,368
District of Columbia	24,884	24,351	21,253	22,870	22,033
Florida	13,673	13,831	12,887	13,637	13,240
Georgia	7,446	6,995	6,664	7,510	6,383
Idaho	116	156	135	6	6
Illinois	282,444	279,842	253,273	274,295	250,995
Indiana	80,141	79,147	73,831	78,675	75,227
Iowa	35,108	35,518	31,159	32,904	29,332
Kansas	37,362	38,514	35,177	31,856	30,515
Kentucky	26,430	26,782	24,690	27,118	25,402
Louisiana	21,216	21,382	18,490	20,352	18,917
Maine	696	1,877	2,196	549	141
Maryland	19,087	24,423	17,449	18,515	15,841
Massachusetts	127,697	137,665	120,202	117,244	96,083
Michigan	107,012	114,640	108,989	109,415	102,932
Minnesota	44,689	51,877	45,862	30,565	29,003
Mississippi	5,363	5,208	4,677	4,845	4,693
Missouri	67,018	67,508	62,171	62,852	61,966
Montana	777	782	671	684	550
Nebraska	22,637	21,752	19,723	21,413	19,976
Nevada	31	124	93	90	90
New Hampshire	3,718	3,636	2,876	2,130	1,915
New Jersey	96,705	95,299	83,285	90,425	82,052
New Mexico	1,368	1,358	1,219	1,365	1,290
New York	380,843	389,969	336,665	358,660	329,400
North Carolina	4,327	6,255	5,175	4,755	4,607
North Dakota	3,171	2,935	2,512	2,490	2,102
Ohio	228,116	228,956	213,475	236,591	224,252
Oklahoma	18,548	21,716	19,322	20,352	19,170
Oregon	10,401	8,770	7,807	7,682	5,898
Pennsylvania	332,327	324,167	295,141	334,647	294,382
Rhode Island	34,555	41,931	36,073	26,738	19,460
South Carolina	4,854	4,529	3,946	3,991	3,837
South Dakota	4,335	4,221	3,690	3,210	2,463
Tennessee	11,829	11,502	10,045	11,240	11,171
Texas	63,955	64,604	56,708	61,117	58,602
Utah	14	22	25	4	36
Vermont	19	71	95	17	13
Virginia	32,734	32,783	26,831	26,942	25,912
Washington	2,297	3,865	6,350	12,221	7,976
West Virginia	99,070	101,624	96,046	111,301	99,911
Wisconsin	49,334	49,859	45,332	43,876	42,446
Wyoming	3,441	3,427	3,054	3,066	2,852
Total	2,497,591	2,512,309	2,246,924	2,351,372	2,144,018
Total by water power	1,322,101	1,293,439	1,220,922	1,465,092	1,465,071
Total by water power and fuels	3,819,692	3,805,748	3,467,846	3,818,931	3,609,089

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during April, 1922, are as follows: Alabama, 31,000; Arkansas, 369,000; Florida, 463,000; Georgia, 539,000; Louisiana, 114,000; Michigan, 64,000; Minnesota, 673,000; Mississippi, 656,000; Oregon, 5,915,000; South Carolina, 63,000; Texas, 163,000; Washington, 1,367,000; Wisconsin, 339,000; and all other States (Arizona, California, Idaho, Maine, New Mexico, and Oklahoma), 739,000.

Electric power produced during December, 1921, and January, February, March, and April, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1921	1922			
	December	January	February	March	April
Alabama	16,993	14,061	7,489	8,372	7,929
Arizona	0	0	331	0	0
Arkansas	10,903	9,277	8,587	9,385	9,152
California	0	0	0	0	0
Colorado	33,122	32,602	29,247	32,193	27,151
Connecticut	60,389	69,692	58,354	55,882	49,746
Delaware	8,386	8,768	7,724	8,073	7,207
District of Columbia	21,077	20,577	18,062	19,164	18,551
Florida	1,897	1,823	1,577	1,696	1,657
Georgia	8,733	8,781	7,138	7,982	6,191
Idaho	0	0	0	0	0
Illinois	393,114	389,387	347,937	372,339	337,603
Indiana	167,597	166,332	148,127	156,769	157,911
Iowa	81,600	82,711	73,417	73,521	66,090
Kansas	19,373	20,762	16,479	15,537	15,052
Kentucky	42,748	43,051	39,417	43,282	39,011
Louisiana	10,457	10,501	9,561	11,311	9,874
Maine	942	1,541	1,716	292	42
Maryland	20,337	25,196	18,724	20,230	17,923
Massachusetts	129,294	132,452	120,819	115,148	98,107
Michigan	114,209	120,480	110,894	112,155	107,210
Minnesota	60,775	69,720	61,119	43,601	40,645
Mississippi	9,165	9,293	8,026	8,757	8,258
Missouri	107,217	107,102	96,565	97,873	95,434
Montana	3,835	3,743	3,713	3,954	2,363
Nebraska	36,185	35,899	31,654	33,165	30,224
Nevada	171	193	154	150	150
New Hampshire	5,138	4,577	3,677	2,636	2,373
New Jersey	122,214	116,774	99,389	104,719	98,916
New Mexico	3,296	3,343	2,928	3,255	3,145
New York	400,600	412,536	354,565	368,742	341,954
North Carolina	8,300	11,125	9,409	8,587	8,374
North Dakota	16,397	15,995	14,111	13,400	11,644
Ohio	279,789	290,412	254,971	268,177	251,680
Oklahoma	8,119	7,595	5,598	5,584	5,437
Oregon	150	135	120	132	120
Pennsylvania	426,466	424,299	368,610	417,820	361,702
Rhode Island	10,379	11,428	10,935	9,593	8,252
South Carolina	8,486	8,494	7,629	7,779	7,586
South Dakota	8,975	8,094	7,334	7,571	5,387
Tennessee	21,849	20,931	17,779	19,304	19,038
Texas	17,281	20,561	15,491	16,274	16,378
Utah	40	40	42	12	100
Vermont	121	172	150	45	45
Virginia	40,378	39,456	32,934	36,855	30,917
Washington	2,905	3,061	3,608	10,414	8,605
West Virginia	85,451	93,554	86,475	100,505	89,109
Wisconsin	69,106	68,916	63,373	63,317	60,140
Wyoming	8,528	8,093	7,300	7,400	6,658
Total	2,902,937	2,953,540	2,593,259	2,722,952	2,491,091

State	Fuel oil - barrels				
	1921	1922			
	December	January	February	March	April
Alabama	10,057	5,618	4,409	3,943	3,946
Arizona	11,854	11,922	11,938	12,292	11,745
Arkansas	22,204	20,607	18,546	15,689	15,698
California	387,125	269,705	236,492	185,306	174,281
Colorado	0	0	0	0	0
Connecticut	2,861	2,036	1,918	2,070	1,414
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	62,065	67,484	63,800	66,254	60,873
Georgia	22,382	19,586	19,212	21,585	19,674
Idaho	0	0	0	0	0
Illinois	225	239	210	371	396
Indiana	506	459	387	435	435
Iowa	1,291	1,163	1,148	1,114	966
Kansas	110,507	117,418	102,733	101,387	96,649
Kentucky	441	459	519	623	624
Louisiana	43,685	41,700	43,620	47,193	42,076
Maine	2,654	4,957	2,693	2,801	510
Maryland	0	0	0	0	0
Massachusetts	47,423	48,613	43,395	43,513	32,391
Michigan	131	126	97	113	129
Minnesota	704	1,096	720	536	483
Mississippi	12,835	12,833	11,309	11,638	11,342
Missouri	12,954	11,401	13,294	9,288	14,527
Montana	266	331	307	218	206
Nebraska	19,444	17,722	15,706	16,065	14,530
Nevada	0	286	183	275	275
New Hampshire	0	0	0	0	0
New Jersey	141	136	124	136	130
New Mexico	1,966	1,922	1,924	2,186	2,113
New York	10,054	3,933	5,707	7,620	8,910
North Carolina	180	190	300	206	195
North Dakota	166	120	305	168	164
Ohio	663	384	362	369	352
Oklahoma	37,642	51,684	47,607	48,394	44,058
Oregon	3,418	3,636	1,456	733	473
Pennsylvania	140	154	152	194	151
Rhode Island	96,698	117,311	101,224	77,269	55,912
South Carolina	0	50	50	60	50
South Dakota	2,497	2,381	1,891	2,231	2,317
Tennessee	0	0	0	0	0
Texas	256,169	256,108	219,773	239,901	217,203
Utah	0	0	0	0	0
Vermont	0	95	300	0	0
Virginia	0	0	0	0	0
Washington	4,139	3,855	16,050	23,801	18,140
West Virginia	0	16	16	16	16
Wisconsin	402	216	201	204	209
Wyoming	5,863	5,406	5,348	5,971	5,480
Total	1,191,752	1,108,413	995,826	953,168	849,043

State	Natural gas - thousands of cubic feet				
	1921	1922			
	December	January	February	March	April
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	149,538	137,556	125,370	117,106	109,699
California	228,525	174,874	98,795	20,370	28,173
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	2,000	1,876	2,445	2,021
Iowa	0	0	0	0	0
Kansas	242,398	223,785	246,726	215,073	207,652
Kentucky	9,373	8,044	6,878	7,230	8,455
Louisiana	112,284	114,192	119,854	103,017	100,466
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	1,000	2,000	0	172	131
Mississippi	0	0	0	0	0
Missouri	1,203	0	1,223	2,635	2,635
Montana	1,360	1,199	1,035	1,079	1,005
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	10,809	10,625	11,951	12,978	10,509
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	300,080	161,204	215,189	282,840	519,503
Oklahoma	378,883	351,838	342,820	387,922	365,234
Oregon	0	0	0	0	0
Pennsylvania	133,923	130,078	94,780	99,484	94,586
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	132,828	119,407	152,510	156,413	179,689
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	253,367	189,839	174,970	185,813	200,679
Wisconsin	0	0	0	0	0
Wyoming	4,620	6,695	5,400	5,518	5,180
Total	1,962,781	1,633,907	1,599,967	1,600,685	1,836,207

The average daily total production of electricity by public-utility power plants in the United States in April was about 2.4 per cent less than that in March. The average daily total output in kilowatt-hours and the proportion of the total produced by water power for each of the last six months was as follows: November, 121,300,000 kilowatt-hours, water power, 33. 5 per cent; December, 123,200,000, 34.6 per cent; January, 123,200,000, 34.0 per cent; February, 123,800,000, 35.2 per cent; March, 123,200,000, 38.4 per cent; and April, 120,300,000, 40.6 per cent.

In 1920 about 88 per cent of the coal mined in the United States was produced in eight States -- Alabama, Illinois, Indiana, Kentucky, Ohio, Pennsylvania, Virginia, and West Virginia -- and in 1922 their rank in the production of coal is essentially the same. These States during April, 1922, produced about one-third of the total output of electricity by public-utility plants in the United States. The average daily output of electricity by public-utility plants in these States for April was 5.4 per cent less than their average daily output for March. A comparison of the reduction in the average output of electricity in the important coal-producing States in April with the reduction in output of electricity for the entire United States in the same month seems to show that the coal strike has reduced the output of electricity by public-utility plants in the coal-mining States about 4 per cent.

The average daily consumption of coal by public-utility plants in March was 87,800 tons, and in April it was 83,000 tons. The decrease in coal consumption in April was due partly to the increase in the production of electricity by the use of water power.

The curves on page 7 show graphically the monthly and annual variations in the average total output in kilowatt-hours and the average daily output by water power and fuel power. If the reduction in output considered to be caused by the coal strike were eliminated, the curve of total average daily output for 1922 would indicate but little decrease during the period of the usual seasonal decline in output.

The quantities in the table are based on returns received from about 3,200 power plants producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after publication. As a rule, however, the revision is small.

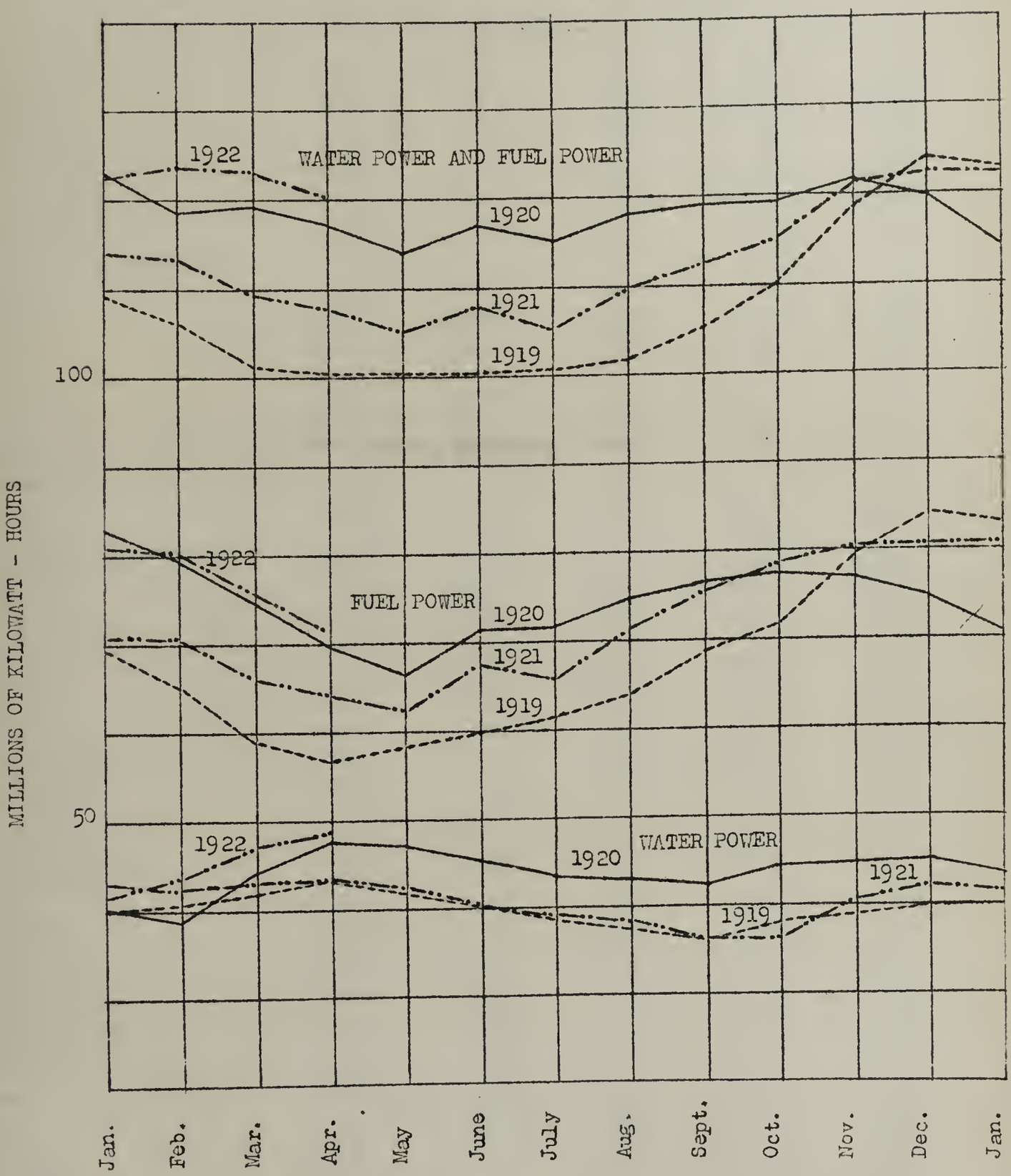
This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in United States, Water Power, Fuel Power, and both Water Power and Fuel Power.

1919 to 1922

Average is obtained by dividing the total for the month by the number of days in the month



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — June 29, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR JANUARY, FEBRUARY, MARCH, APRIL, AND MAY, 1922.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1922				
	January	February	March	April	May
Alabama	38,235	38,154	42,539	41,625	44,610
Arizona	4,393	5,209	8,630	8,538	10,852
Arkansas	144	127	156	120	134
California	254,629	240,360	291,579	306,997	347,812
Colorado	14,762	12,765	13,346	14,828	15,641
Connecticut	8,163	12,446	19,448	19,104	19,332
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	722	659	617	603	531
Georgia	38,857	40,371	45,224	42,205	46,983
Idaho	47,503	41,976	44,199	49,390	56,240
Illinois	15,045	13,950	15,328	13,252	15,853
Indiana	4,874	4,743	5,978	5,251	6,507
Iowa	51,240	45,470	56,041	54,406	63,097
Kansas	1,018	1,366	2,349	2,325	2,350
Kentucky	10	10	8	8	8
Louisiana	0	0	0	0	0
Maine	31,333	27,385	33,607	27,520	31,083
Maryland	243	298	383	317	289
Massachusetts	25,595	23,983	38,156	41,454	41,522
Michigan	52,571	46,916	63,427	65,135	65,914
Minnesota	20,421	15,169	28,010	42,794	46,829
Mississippi	0	0	0	0	0
Missouri	2,358	2,316	6,847	6,643	2,913
Montana	55,359	63,650	80,790	81,703	81,488
Nebraska	1,220	1,238	1,397	1,413	1,476
Nevada	3,221	2,927	3,370	3,270	3,310
New Hampshire	10,275	9,622	19,119	15,905	20,321
New Jersey	154	194	224	219	208
New Mexico	62	52	65	53	56
New York	225,934	212,793	235,959	237,564	264,597
North Carolina	21,505	20,076	23,003	21,877	31,981
North Dakota	0	0	0	0	0
Ohio	3,098	3,285	3,998	3,770	3,817
Oklahoma	155	97	220	197	166
Oregon	35,414	31,925	34,889	32,590	32,951
Pennsylvania	47,817	49,664	56,490	54,887	58,753
Rhode Island	357	542	853	938	840
South Carolina	76,453	72,815	75,490	71,368	72,520
South Dakota	514	468	1,300	1,776	1,648
Tennessee	31,192	27,747	29,571	26,752	25,817
Texas	422	389	369	355	379
Utah	3,931	3,465	3,426	4,267	4,493
Vermont	9,681	9,175	10,965	12,522	9,896
Virginia	17,702	19,848	27,230	22,781	26,252
Washington	107,821	90,047	92,463	95,251	101,595
West Virginia	2,404	2,582	2,904	2,843	3,287
Wisconsin	26,488	24,515	48,267	57,284	62,243
Wyoming	154	134	118	149	117
Total	1,293,439	1,220,922	1,467,832	1,492,249	1,688,711

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

1922

State	January	February	March	April	May
Alabama	9,298	3,899	4,430	4,544	6,877
Arizona	2,816	2,796	2,730	2,709	2,794
Arkansas	10,664	9,449	9,464	8,996	9,311
California	57,928	48,674	20,716	21,318	21,959
Colorado	19,337	17,283	17,620	15,409	15,949
Connecticut	51,375	43,131	42,843	35,043	36,069
Delaware	7,018	6,428	6,696	6,368	6,754
District of Columbia	24,351	21,253	22,870	22,033	23,293
Florida	13,831	12,887	13,637	12,634	12,545
Georgia	6,995	6,664	7,510	6,357	5,928
Idaho	156	135	6	132	143
Illinois	279,842	253,273	274,295	250,375	246,174
Indiana	79,147	73,831	78,675	75,467	76,785
Iowa	35,518	31,159	32,904	29,329	29,541
Kansas	38,514	35,177	31,832	30,341	32,305
Kentucky	28,782	24,690	27,113	25,526	26,227
Louisiana	21,382	18,490	20,383	18,921	20,138
Maine	1,877	2,196	549	141	66
Maryland	24,423	17,449	18,515	15,841	16,563
Massachusetts	137,665	120,202	117,244	96,614	98,632
Michigan	114,640	108,989	109,401	102,794	112,879
Minnesota	51,877	45,862	30,595	11,865	11,673
Mississippi	5,208	4,677	4,845	4,579	4,624
Missouri	67,508	62,171	62,852	61,760	62,026
Montana	782	671	684	583	571
Nebraska	21,752	19,723	21,438	19,963	21,480
Nevada	124	93	90	45	32
New Hampshire	3,636	2,876	2,130	1,915	2,124
New Jersey	95,299	83,285	90,425	82,376	84,488
New Mexico	1,358	1,219	1,336	1,308	1,345
New York	389,969	336,665	358,664	329,275	334,232
North Carolina	6,255	5,175	4,880	4,345	4,415
North Dakota	2,935	2,512	2,490	2,097	2,061
Ohio	228,956	213,475	238,253	224,914	240,387
Oklahoma	21,716	19,322	20,287	19,208	19,663
Oregon	8,770	7,807	7,682	5,168	5,224
Pennsylvania	324,167	295,141	334,899	292,124	300,799
Rhode Island	41,931	36,073	26,738	19,460	19,927
South Carolina	4,529	3,946	3,991	3,630	3,637
South Dakota	4,221	3,690	3,211	2,466	2,614
Tennessee	11,502	10,045	11,240	11,174	11,711
Texas	64,604	56,708	61,523	58,609	62,880
Utah	22	25	4	36	35
Vermont	71	95	17	13	0
Virginia	32,783	26,831	27,156	25,755	27,030
Washington	3,865	6,350	12,221	2,398	1,968
West Virginia	101,624	96,046	111,301	99,911	103,830
Wisconsin	49,859	45,332	43,684	40,638	40,762
Wyoming	3,427	3,054	3,066	2,852	2,753
Total	2,512,309	2,246,924	2,354,134	2,109,459	2,173,223
Total by water power	1,293,439	1,220,922	1,467,832	1,492,249	1,626,711
Total by water power and fuels	3,805,748	3,467,846	3,821,966	3,601,708	3,799,934

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during May, 1922, are as follows: Alabama, 35,000; Arkansas, 434,000; Florida, 450,000; Georgia, 461,000; Louisiana, 153,000; Michigan, 56,000; Minnesota, 619,000; Mississippi, 473,000; Oregon, 5,193,000; South Carolina, 63,000; Washington, 1,409,000; Wisconsin, 482,000; and all other States (Arizona, California Idaho, Maine, New Mexico, and Texas), 1,167,000.

Electric power produced during January, February, March, April, and May, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1922				
	January	February	March	April	May
Alabama	14,061	7,489	8,372	7,929	10,189
Arizona	0	331	0	0	0
Arkansas	9,277	8,587	9,350	8,460	8,280
California	0	0	0	0	0
Colorado	32,602	29,247	32,193	27,176	29,517
Connecticut	69,692	58,354	55,882	49,196	50,339
Delaware	8,768	7,724	8,073	7,207	9,013
District of Columbia	20,577	18,062	19,164	18,551	19,353
Florida[a]	1,823	1,577	1,696	1,757	1,809
Georgia	8,781	7,138	7,982	6,166	5,650
Idaho	0	0	0	0	0
Illinois	389,387	347,937	372,339	336,038	324,724
Indiana	166,332	148,127	156,769	157,427	146,011
Iowa	82,711	73,417	73,521	66,557	62,643
Kansas	20,762	16,479	15,432	14,821	14,930
Kentucky	43,051	39,417	43,257	38,803	41,851
Louisiana	10,501	9,561	11,311	9,859	10,260
Maine	1,541	1,716	292	42	75
Maryland	25,196	18,724	20,230	17,923	18,939
Massachusetts	132,452	120,819	115,148	98,010	95,626
Michigan	120,480	110,894	112,085	107,069	116,414
Minnesota	69,720	61,119	43,751	24,510	22,591
Mississippi	9,293	8,026	8,757	8,178	8,062
Missouri	107,102	96,565	97,873	94,701	91,972
Montana	3,743	3,713	3,954	2,518	2,595
Nebraska	35,899	31,654	33,150	30,275	30,986
Nevada	193	154	150	140	145
New Hampshire	4,577	3,677	2,636	2,373	2,612
New Jersey	116,774	99,389	104,719	100,082	102,879
New Mexico	3,343	2,928	3,435	3,215	2,817
New York	412,536	354,565	368,742	340,681	346,923
North Carolina	11,125	9,409	9,032	8,032	8,122
North Dakota	15,995	14,111	13,400	11,024	10,060
Ohio	290,412	254,971	268,611	252,856	265,028
Oklahoma	7,595	5,598	5,396	5,120	5,197
Oregon	135	120	132	120	124
Pennsylvania	424,299	368,610	418,214	360,013	374,688
Rhode Island	11,428	10,935	9,593	8,252	8,356
South Carolina	8,494	7,629	7,779	7,196	7,298
South Dakota	8,094	7,334	7,571	5,387	5,815
Tennessee	20,931	17,779	19,304	18,951	20,011
Texas	20,561	15,491	16,261	16,381	16,374
Utah	40	42	12	100	100
Vermont	172	150	45	30	0
Virginia	39,456	32,934	36,810	31,892	33,181
Washington	3,061	3,608	10,414	260	260
West Virginia	93,554	86,475	100,505	89,109	94,633
Wisconsin	68,916	63,373	62,819	56,745	50,884
Wyoming	8,098	7,300	7,400	6,658	7,164
Total	2,953,540	2,593,259	2,723,561	2,457,790	2,484,500

State	Fuel oil - barrels				
	1922				
	January	February	March	April	May
Alabama	5,613	4,409	3,943	3,946	4,253
Arizona	11,922	11,938	12,292	11,213	11,893
Arkansas	20,607	18,546	15,695	16,741	14,001
California	269,705	236,492	180,916	152,406	141,426
Colorado	0	0	0	0	0
Connecticut	2,086	1,918	2,070	1,414	1,759
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	67,484	63,800	66,254	60,837	61,354
Georgia	19,586	19,212	21,585	19,458	19,862
Idaho	0	0	0	0	0
Illinois	239	210	371	396	197
Indiana	459	387	435	435	459
Iowa	1,163	1,148	1,114	966	1,034
Kansas	117,418	102,733	101,270	94,949	86,581
Kentucky	469	519	623	603	593
Louisiana	41,700	43,620	47,195	41,906	41,286
Maine	4,957	2,693	2,801	510	1,217
Maryland	0	0	0	0	0
Massachusetts	48,618	43,395	43,513	32,514	35,227
Michigan	126	97	113	129	93
Minnesota	1,096	720	536	423	448
Mississippi	12,833	11,309	11,638	11,342	11,601
Missouri	11,401	13,294	9,288	14,302	17,587
Montana	331	307	218	240	148
Nebraska	17,722	15,706	16,122	14,641	15,844
Nevada	286	183	275	67	20
New Hampshire	0	0	0	0	0
New Jersey	136	124	136	130	130
New Mexico	1,922	1,924	2,186	2,140	2,378
New York	3,933	5,707	7,664	8,910	9,936
North Carolina	190	200	206	195	206
North Dakota	120	305	168	167	150
Ohio	384	362	369	344	337
Oklahoma	51,684	47,607	48,591	44,347	43,491
Oregon	3,636	1,456	733	458	321
Pennsylvania	154	152	194	151	141
Rhode Island	117,311	101,224	77,269	55,912	54,329
South Carolina	50	50	60	50	50
South Dakota	2,381	1,891	2,246	2,029	1,995
Tennessee	0	0	0	0	0
Texas	256,108	219,773	241,871	219,241	238,209
Utah	0	0	0	0	0
Vermont	95	300	0	0	0
Virginia	0	0	0	0	0
Washington	8,855	16,050	23,801	8,140	4,831
West Virginia	16	16	16	16	16
Wisconsin	216	201	204	209	231
Wyoming	5,406	5,848	5,971	5,480	5,347
Total	1,108,413	995,826	949,952	827,357	828,981

State	Natural gas -- thousands of cubic feet 1923				
	January	February	March	April	May
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	137,556	125,370	117,106	111,909	135,714
California	174,874	93,795	223,370	28,173	125,433
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,000	1,876	2,445	2,021	2,020
Iowa	0	0	0	0	0
Kansas	223,785	246,726	215,073	223,079	292,748
Kentucky	8,044	6,878	7,230	8,455	7,855
Louisiana	114,192	119,854	103,017	101,664	88,196
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	2,000	0	172	131	0
Mississippi	0	0	0	0	0
Missouri	0	1,223	2,635	0	0
Montana	1,199	1,035	1,079	1,005	1,123
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	10,625	11,951	12,978	10,350	18,286
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	161,204	215,189	282,840	519,478	611,599
Oklahoma	351,838	342,820	386,369	366,323	381,975
Oregon	0	0	0	0	0
Pennsylvania	130,078	94,780	99,484	93,700	115,036
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	119,407	152,510	156,413	177,424	175,801
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	189,839	174,970	185,813	200,679	244,559
Wisconsin	0	0	0	0	0
Wyoming	6,695	5,400	5,518	5,180	5,538
Total	1,633,907	1,599,967	1,599,132	1,850,161	2,206,473

The average daily total production of electricity by public-utility power plants in the United States in May was about 2.1 per cent more than that in April. The average daily total output and the proportion of the total produced by water power for each of the last six months were as follows: December, 123,200,000 kilowatt-hours, 34.6 per cent; January, 123,200,000 kilowatt-hours, 34.0 per cent; February, 123,800,000 kilowatt-hours, 35.2 per cent; March, 123,200,000 kilowatt-hours, 38.4 per cent; April, 120,100,000 kilowatt-hours, 41.4 per cent; and May, 122,600,000 kilowatt-hours, 42.8 per cent.

An analysis of the production of electricity in March, April, and May by public-utility plants in the eight leading States in the production of coal -- Alabama, Illinois, Indiana, Kentucky, Ohio, Pennsylvania, Virginia, and West Virginia -- indicates that the coal strike may have affected the demand for electricity in these States to some extent. Considering the mean daily output for March in these eight States as 100 per cent, the figures for April and May are 94.5 per cent and 94.7 per cent respectively. A comparison on the same basis of the mean daily output for the remaining States, excluding California, Oregon, and Washington, gives for April and May 97.7 and 99.2 per cent respectively.

The average daily consumption of coal by public-utility plants in March was 87,900 tons, in April, 81,900 tons, and May, 80,100 tons. The decrease in coal consumption is due to the increase in the production of electricity by the use of water power.

The curves on page 7 show the monthly and annual variations in the average total output in electricity in kilowatt-hours by public-utility plants and the average daily output by water power and fuel power. The production of electricity by water power in May was more than in any previous month of record.

The quantities in the table are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 90 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

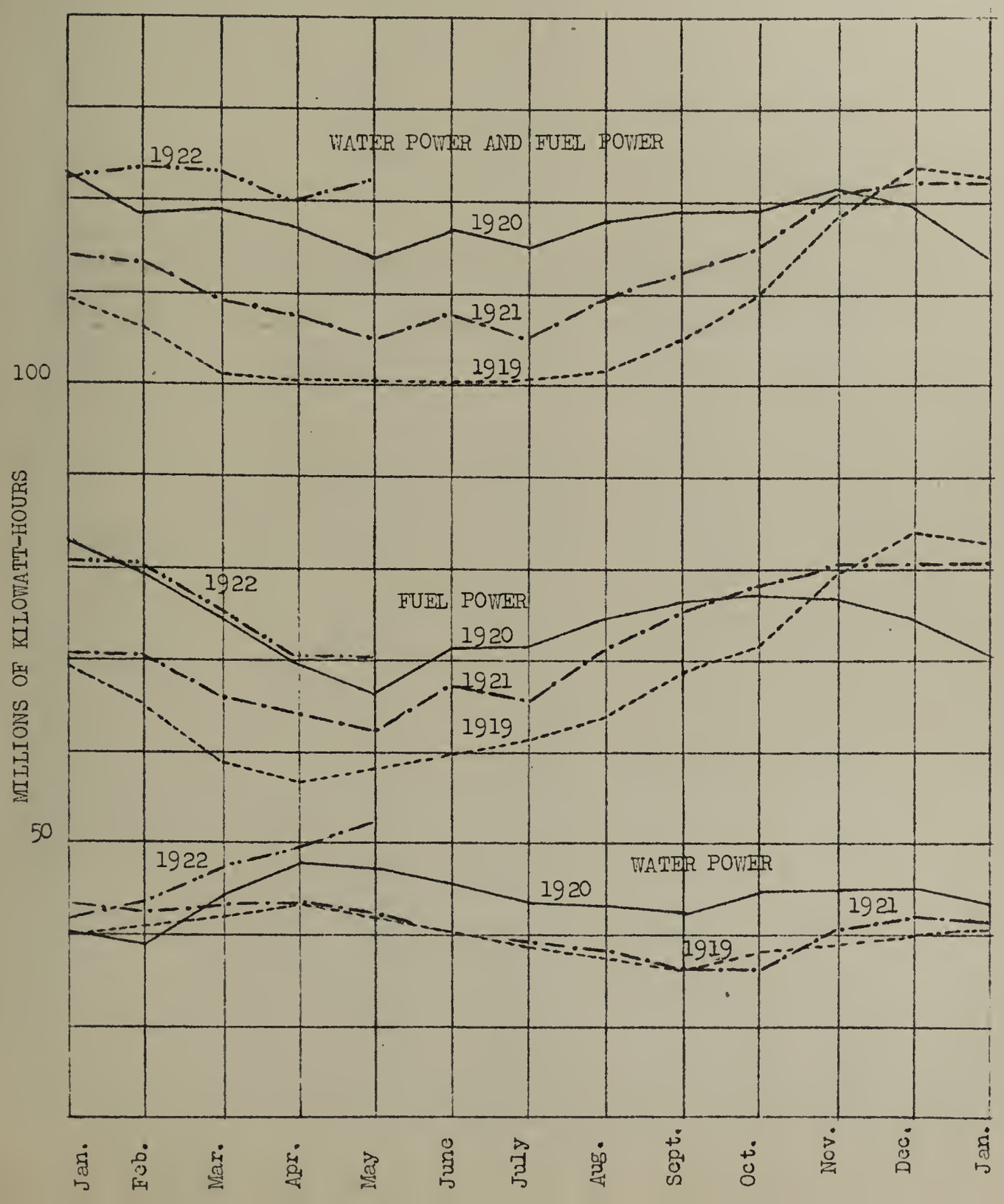
Prepared under the direction of A. H. Horton.

Average Daily Production of Electricity by Public Utility Plants in United States

Water Power, Fuel Power, and both Water Power and Fuel Power.

1919 to 1922

Average is obtained by dividing the total for the month by the number of days in the month.



DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director

September 30, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR APRIL, MAY, JUNE, JULY, AND AUGUST, 1922.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1922 April	May	June	July	August
Alabama	41,625	44,610	39,409	28,630	18,236
Arizona	8,538	10,852	11,530	12,367	12,180
Arkansas	120	134	129	156	155
California	306,997	358,807	369,533	375,313	391,984
Colorado	14,828	15,647	15,224	15,704	16,971
Connecticut	19,104	19,332	18,311	14,903	12,978
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	603	531	707	851	888
Georgia	42,205	46,983	45,796	44,817	47,388
Idaho	49,390	59,925	61,615	57,525	55,731
Illinois	13,252	15,853	16,394	16,992	16,992
Indiana	5,251	6,542	5,266	3,505	2,445
Iowa	54,346	63,076	62,116	61,905	54,423
Kansas	2,325	2,350	1,609	2,192	1,148
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	27,520	31,083	30,677	31,330	34,308
Maryland	317	289	241	280	171
Massachusetts	41,932	41,910	40,069	35,827	31,928
Michigan	65,135	66,036	57,496	56,953	52,664
Minnesota	42,794	47,668	36,852	32,538	27,480
Mississippi	0	0	0	0	0
Missouri	6,643	2,913	1,358	1,776	1,086
Montana	81,703	85,710	82,969	82,439	86,845
Nebraska	1,413	1,476	1,643	1,740	1,737
Nevada	3,270	3,322	2,966	2,940	3,121
New Hampshire	15,905	20,320	18,811	18,903	18,553
New Jersey	219	208	189	181	135
New Mexico	53	73	83	72	50
New York	233,376	260,495	242,493	243,571	259,039
North Carolina	21,651	31,968	29,892	24,390	24,066
North Dakota	0	0	0	0	0
Ohio	3,770	3,869	2,740	2,836	1,808
Oklahoma	197	166	253	220	99
Oregon	32,590	32,596	31,650	29,160	26,536
Pennsylvania	54,887	58,759	56,812	48,397	32,869
Rhode Island	938	840	579	584	394
South Carolina	71,368	67,933	69,511	71,101	72,149
South Dakota	1,817	1,691	950	831	1,022
Tennessee	26,752	30,869	29,986	29,110	24,722
Texas	355	379	148	182	183
Utah	4,262	6,776	10,808	17,558	17,316
Vermont	12,522	10,041	10,847	10,544	11,854
Virginia	22,781	26,205	23,009	22,332	15,692
Washington	95,267	102,712	100,882	98,792	109,775
West Virginia	2,843	3,287	2,712	2,252	1,357
Wisconsin	57,284	62,303	53,558	45,166	35,619
Wyoming	149	117	112	121	138
Total	1,488,305	1,646,674	1,587,943	1,546,994	1,524,243

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

1922

State	April	May	June	July	August
Alabama	4,441	6,902	12,292	22,532	38,311
Arizona	2,716	2,811	3,119	3,552	3,400
Arkansas	8,996	9,310	11,062	11,851	12,058
California	21,318	28,762	32,361	41,875	53,488
Colorado	15,409	15,940	17,065	16,729	17,458
Connecticut	35,043	36,107	37,504	40,775	47,908
Delaware	6,368	6,754	6,562	6,605	7,278
District of Columbia	22,033	23,293	23,558	23,666	23,376
Florida	12,634	12,548	11,346	10,961	11,190
Georgia	6,357	5,926	6,486	7,126	7,202
Idaho	132	143	52	219	31
Illinois	250,370	246,385	246,844	250,314	256,158
Indiana	75,462	77,855	78,424	81,518	86,013
Iowa	29,329	29,670	30,970	31,756	33,875
Kansas	30,360	32,540	37,590	37,670	43,580
Kentucky	25,526	26,242	26,243	24,809	23,044
Louisiana	18,954	20,174	20,103	20,393	21,097
Maine	141	66	99	164	496
Maryland	15,841	16,565	18,060	24,572	43,041
Massachusetts	96,614	98,595	100,839	102,283	117,984
Michigan	102,751	110,461	121,005	120,665	136,849
Minnesota	11,862	10,743	20,674	30,254	43,581
Mississippi	4,679	4,603	4,717	4,801	4,922
Missouri	61,760	61,530	61,932	62,156	69,282
Montana	583	569	589	602	657
Nebraska	19,963	21,314	21,963	21,760	23,241
Nevada	45	32	35	58	90
New Hampshire	1,915	2,124	2,299	2,359	2,830
New Jersey	81,226	83,623	83,522	85,663	93,929
New Mexico	1,308	1,373	1,308	1,494	1,549
New York	329,268	334,101	337,303	344,358	360,558
North Carolina	4,254	4,440	4,369	4,309	4,472
North Dakota	2,097	2,056	2,211	2,547	2,737
Ohio	224,914	239,057	242,003	237,360	264,106
Oklahoma	19,277	20,500	20,827	21,212	21,941
Oregon	5,168	5,230	5,971	7,929	16,393
Pennsylvania	292,124	301,264	308,848	309,917	322,940
Rhode Island	19,460	19,927	21,833	28,178	30,313
South Carolina	3,630	3,535	3,599	3,822	4,411
South Dakota	2,466	2,640	3,381	3,641	3,826
Tennessee	11,174	11,701	11,449	11,684	11,522
Texas	58,645	63,100	64,385	67,936	71,953
Utah	36	0	0	0	0
Vermont	13	0	1	122	156
Virginia	25,755	27,038	30,013	29,491	37,487
Washington	2,398	1,964	1,982	1,684	4,252
West Virginia	99,911	104,000	106,649	102,521	106,967
Wisconsin	40,638	40,670	41,372	45,890	48,090
Wyoming	2,851	2,734	2,668	2,517	2,810
Total	2,108,215	2,176,917	2,247,487	2,314,300	2,538,852
Total by water power	1,488,305	1,646,674	1,587,943	1,546,994	1,524,243
Total by water power and fuels	3,596,520	3,823,591	3,835,430	3,861,294	4,063,095

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during August, 1922, are as follows: Alabama, 32,000; Arkansas, 273,000; Florida, 405,000; Georgia, 568,000; Louisiana, 163,000; Michigan, 56,000; Minnesota, 488,000; Mississippi, 1,033,000; Oregon, 15,937,000; South Carolina, 71,000; Washington, 980,000; Wisconsin, 554,000; and all other States (Arizona, California, Idaho, Illinois, Indiana, Maine, Missouri, Montana, New Nexico, and Texas), 2,772,000.

Electric power produced during April, May, June, July, and August, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons 1922				
	April	May	June	July	August
Alabama	7,995	10,221	15,474	25,242	41,539
Arizona	0	0	298	178	50
Arkansas	8,460	8,280	8,072	6,540	4,798
California	0	0	0	0	0
Colorado	27,176	29,457	29,813	29,546	48,479
Connecticut	49,196	50,571	48,444	53,765	60,592
Delaware	7,207	9,013	8,500	8,778	8,853
District of Columbia	18,551	19,353	19,446	19,274	19,296
Florida	1,757	1,809	1,794	1,690	1,715
Georgia	6,166	5,655	6,407	7,145	7,561
Idaho	0	0	0	0	0
Illinois	336,033	324,856	312,222	327,354	336,910
Indiana	157,359	146,013	146,527	152,361	159,793
Iowa	66,557	62,908	63,124	63,462	62,524
Kansas	14,822	13,555	12,128	10,652	14,413
Kentucky	38,803	42,026	41,591	39,981	39,715
Louisiana	9,859	10,260	9,790	7,705	4,969
Maine	42	75	25	0	382
Maryland	17,923	18,947	19,875	25,767	41,226
Massachusetts	98,010	95,597	97,001	98,630	110,739
Michigan	106,577	112,216	122,857	126,735	143,673
Minnesota	24,510	21,721	28,631	34,945	46,454
Mississippi	8,178	7,992	7,972	8,156	7,706
Missouri	94,701	89,977	81,955	74,432	67,833
Montana	2,518	2,710	3,011	3,697	3,640
Nebraska	30,275	30,411	30,698	32,078	24,548
Nevada	140	145	160	202	200
New Hampshire	2,373	2,612	2,982	2,959	3,251
New Jersey	98,667	101,561	99,841	102,881	112,653
New Mexico	3,215	2,817	2,487	2,750	2,698
New York	340,666	346,738	348,573	355,266	378,444
North Carolina	7,712	7,960	8,865	9,515	9,942
North Dakota	11,024	9,945	9,975	10,916	11,979
Ohio	252,856	261,337	261,299	266,796	338,664
Oklahoma	6,150	4,079	6,285	5,869	3,969
Oregon	120	134	120	140	140
Pennsylvania	360,013	376,081	383,274	390,538	417,400
Rhode Island	8,252	8,356	8,734	8,891	9,369
South Carolina	7,196	7,068	7,067	7,675	8,672
South Dakota	5,387	5,764	6,490	5,618	6,888
Tennessee	18,951	20,080	20,101	20,133	19,590
Texas	16,401	16,621	17,097	25,571	29,540
Utah	100	0	0	0	0
Vermont	30	0	5	56	130
Virginia	31,892	33,105	35,225	34,863	42,389
Washington	260	240	406	1,263	847
West Virginia	89,109	94,831	95,841	96,466	98,670
Wisconsin	56,745	51,002	47,953	51,281	54,163
Wyoming	6,658	7,034	7,424	6,845	7,135
Total	2,456,592	2,471,123	2,486,099	2,563,607	2,814,141

State	Fuel oil - barrels 1922				
	April	May	June	July	August
Alabama	3,875	4,465	4,048	4,410	4,185
Arizona	11,283	11,539	13,347	15,212	15,026
Arkansas	16,741	14,001	21,786	22,115	21,646
California	152,406	168,645	171,892	197,441	195,067
Colorado	0	0	0	0	0
Connecticut	1,414	1,759	1,558	1,365	1,622
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	60,837	61,574	58,262	56,266	57,733
Georgia	19,458	19,862	20,303	21,288	20,888
Idaho	0	0	0	0	0
Illinois	400	201	247	347	25,134
Indiana	435	459	482	429	506
Iowa	966	1,032	969	1,046	9,933
Kansas	95,131	89,280	95,549	103,910	115,513
Kentucky	603	433	404	1,641	3,966
Louisiana	41,990	41,370	43,864	51,949	65,892
Maine	510	1,217	443	1,074	2,134
Maryland	0	0	0	0	0
Massachusetts	32,514	35,418	38,705	39,331	44,237
Michigan	129	93	77	85	115
Minnesota	423	448	624	702	1,069
Mississippi	11,342	11,601	11,571	11,445	11,430
Missouri	14,302	17,601	51,023	55,788	130,294
Montana	240	148	224	220	321
Nebraska	14,641	16,487	16,998	17,778	47,835
Nevada	67	20	10	158	236
New Hampshire	0	0	0	15	0
New Jersey	130	130	131	131	331
New Mexico	2,140	2,453	2,123	2,523	2,369
New York	8,910	9,739	10,388	13,877	15,592
North Carolina	195	206	178	178	100
North Dakota	167	150	150	235	141
Ohio	344	337	338	340	1,340
Oklahoma	40,782	39,761	40,578	42,112	46,130
Oregon	458	321	283	829	2,006
Pennsylvania	151	141	158	211	236
Rhode Island	55,912	54,329	62,363	79,025	101,538
South Carolina	50	50	50	60	0
South Dakota	2,029	1,996	2,153	2,151	2,455
Tennessee	0	0	0	0	0
Texas	219,277	238,482	238,595	240,357	261,145
Utah	0	0	0	0	0
Vermont	0	0	0	900	900
Virginia	0	0	0	0	0
Washington	8,140	4,831	4,658	3,866	16,851
West Virginia	16	16	0	0	0
Wisconsin	209	231	238	242	252
Wyoming	5,480	5,347	5,174	5,753	5,427
Total	824,097	856,173	919,960	996,805	1,231,595

State	Natural gas - thousands of cubic feet 1922				
	April	May	June	July	August
Alabama	0	0	0	0	0
Ari zona	0	0	0	0	0
Arkansas	111,909	135,714	128,909	137,985	224,595
California	28,173	125,433	162,835	239,495	518,499
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,021	1,877	2,076	1,844	2,365
Iowa	0	0	0	0	0
Kansas	223,079	289,118	371,208	378,769	436,012
Kentucky	8,455	7,855	13,160	16,673	22,531
Louisiana	101,664	87,471	86,440	91,030	93,995
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,005	1,123	1,042	1,066	1,146
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	10,350	18,278	6,401	12,172	20,077
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	519,478	611,579	625,115	655,640	652,554
Oklahoma	366,323	391,765	440,600	449,200	449,526
Oregon	0	0	0	0	0
Pennsylvania	93,700	115,287	71,990	72,374	53,914
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	177,574	176,624	209,417	246,317	278,518
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	200,679	244,595	219,384	246,983	251,762
Wisconsin	0	0	0	0	0
Wyoming	5,180	5,538	5,621	4,478	4,703
Total	1,880,180	2,212,847	2,744,788	2,604,616	3,010,787

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919-1922

Coal
(Net tons)

Month	1919	1920	1921	1922
January	104,000	115,600	95,900	95,300
February	102,000	111,500	93,900	92,600
March	93,900	105,000	85,200	87,800
April	88,100	97,200	80,600	81,900
May	85,300	91,100	77,900	79,700
June	88,300	95,000	81,360	82,900
July	85,700	94,800	79,400	82,700
August	86,700	97,100	83,200	90,800
September	92,200	100,100	86,300	
October	98,400	101,800	89,000	
November	112,500	105,200	92,600	
December	116,800	103,200	93,700	
Year	96,200	101,400	86,500	

Oil
(barrels)

Month	1919	1920	1921	1922
January	21,900	41,600	28,900	35,700
February	21,900	40,300	27,900	35,600
March	20,400	34,200	27,400	30,600
April	19,400	30,400	28,100	27,500
May	23,300	29,800	27,500	27,600
June	29,000	35,900	30,500	30,700
July	32,100	38,400	33,200	32,200
August	34,600	38,700	37,600	39,700
September	37,100	40,700	39,700	
October	39,000	37,700	38,100	
November	41,700	32,000	38,200	
December	40,800	30,600	38,400	
Year	30,300	35,900	33,000	

Gas
(M cubic feet)

Month	1919	1920	1921	1922
January	35,500	46,100	55,300	52,700
February	47,100	45,300	52,000	57,100
March	57,000	50,800	50,100	51,600
April	62,000	60,100	62,000	61,700
May	62,100	68,400	64,300	71,400
June	66,200	75,200	69,000	78,200
July	66,400	83,700	62,400	84,000
August	64,500	87,400	74,700	97,100
September	63,400	90,500	78,900	
October	64,400	77,600	73,600	
November	60,700	63,600	73,800	
December	51,000	60,400	63,300	
Year	58,600	67,500	65,000	

The production of electricity by public-utility power plants in August again broke all previous records with an average daily production of 131,100,000 kilowatt-hours, exceeding the record for June of 127,800,000 kilowatt-hours by about 2½ per cent and the July rate by about 5 per cent. As the output of electricity by water power is falling off, due to the usual seasonal decrease in the water supply, the increased demand for electric power was met by fuel-generated power.

A comparison of the relative amounts of the different fuels consumed in June and August, after converting the different fuels to a comparative basis, shows that the proportion of oil and gas used by public-utility power plants in the production of electricity was about 15 per cent greater in August than in June. Evidently the scarcity of coal has increased the use of oil and gas.

The record-breaking output in the production of electricity for August was due, no doubt, to the increase in the domestic and commercial lighting load brought about by the activity in the building industry which has continued during the summer months with but little decrease and by the demand for power by the industries which has probably been augmented by some of the industries turning to public-utility plants for power when unable to operate their own power plants through lack of coal.

The average daily output of electricity and the proportion produced by water power for each month of this year were as follows: January, 123,200,000 kilowatt-hours, 34.0 per cent; February, 123,800,000 kilowatt-hours, 35.2 per cent; March, 123,200,000 kilowatt-hours, 38.5 per cent; April, 119,900,000 kilowatt-hours, 41.4 per cent; May, 123,300,000 kilowatt-hours, 43.1 per cent; June, 127,800,000 kilowatt-hours, 41.4 per cent; July, 134,600,000 kilowatt-hours, 40.1 per cent; and August, 131,100,000 kilowatt-hours, 37.5 per cent.

The curves on page 8 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 96 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

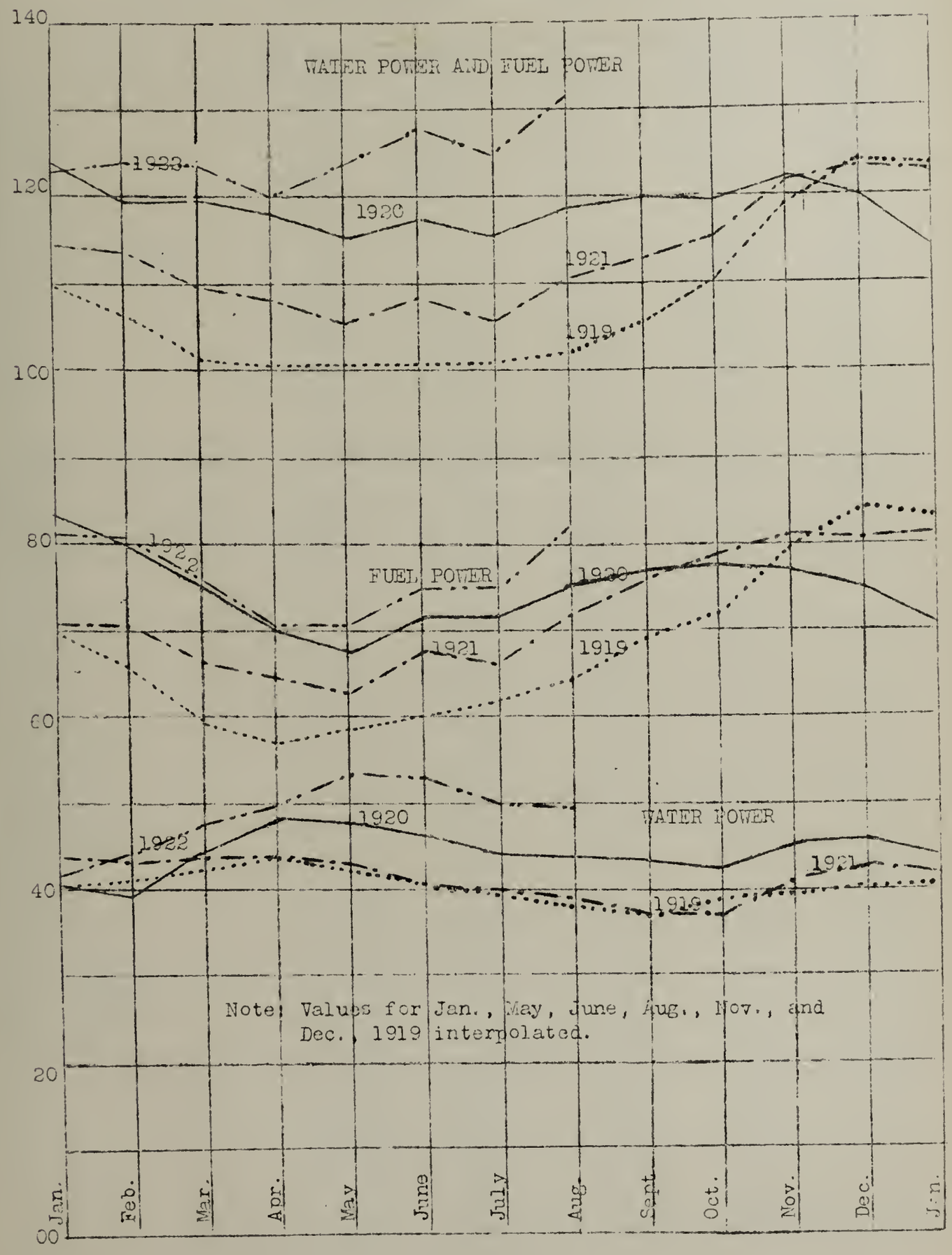
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1919 to 1923

(Average is obtained by dividing the total for the month by the number of days in the month.)



Note: Values for Jan., May, June, Aug., Nov., and Dec., 1919 interpolated.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — October 31, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR MAY, JUNE, JULY, AUGUST, AND SEPTEMBER, 1922.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1922				
	May	June	July	August	September
Alabama	44,610	39,409	28,650	18,259	12,566
Arizona	10,852	11,530	12,367	12,180	11,186
Arkansas	134	129	156	155	155
California	358,807	369,533	375,313	358,344	331,948
Colorado	15,647	15,224	15,704	16,971	14,517
Connecticut	19,332	18,311	14,919	12,994	11,495
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	531	707	851	888	964
Georgia	46,983	45,796	44,817	47,522	43,470
Idaho	59,925	61,615	57,525	56,176	54,177
Illinois	15,853	16,394	16,992	17,550	17,454
Indiana	6,542	5,266	3,505	2,445	2,201
Iowa	63,076	62,116	61,905	54,798	45,010
Kansas	2,350	1,609	2,192	1,148	697
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	31,083	30,677	31,330	34,308	33,308
Maryland	289	241	280	171	110
Massachusetts	41,910	40,069	35,815	29,369	25,050
Michigan	66,036	57,496	56,945	52,723	54,366
Minnesota	47,668	36,852	32,538	27,480	23,572
Mississippi	0	0	0	0	0
Missouri	2,913	1,358	1,776	1,086	32
Montana	85,710	82,939	82,439	83,921	80,864
Nebraska	1,476	1,643	1,755	1,737	1,292
Nevada	3,322	2,966	2,940	3,119	3,215
New Hampshire	20,320	18,811	18,909	11,494	9,798
New Jersey	208	189	181	135	170
New Mexico	73	83	72	50	45
New York	260,495	242,493	243,487	259,025	252,241
North Carolina	31,968	29,892	24,390	25,140	26,974
North Dakota	0	0	0	0	0
Ohio	3,869	2,740	2,836	1,426	1,626
Oklahoma	166	253	220	99	68
Oregon	32,596	31,650	29,160	26,847	23,624
Pennsylvania	58,759	56,812	48,397	32,869	31,216
Rhode Island	340	579	584	394	582
South Carolina	67,933	69,511	71,101	72,411	69,137
South Dakota	1,691	950	831	972	794
Tennessee	30,869	29,986	29,110	30,817	27,721
Texas	379	148	182	219	208
Utah	6,776	10,808	17,558	18,348	18,293
Vermont	10,041	10,847	10,537	13,324	13,286
Virginia	26,205	23,009	22,413	13,803	9,315
Washington	102,712	100,882	104,842	109,062	99,259
West Virginia	3,287	2,712	2,252	1,357	895
Wisconsin	62,303	53,558	45,166	35,687	38,015
Wyoming	117	112	121	138	149
Total	1,646,674	1,587,943	1,553,051	1,486,969	1,391,073

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS 1922

State	May	June	July	August	September
Alabama	6,902	12,292	22,403	38,266	51,070
Arizona	2,811	3,119	3,552	3,400	3,421
Arkansas	9,310	11,062	11,899	12,130	11,898
California	28,762	32,361	41,875	66,688	71,918
Colorado	15,940	17,065	16,729	17,459	19,279
Connecticut	36,107	37,504	40,821	48,204	49,739
Delaware	6,754	6,562	6,605	7,278	7,188
District of Columbia	23,293	23,558	23,666	23,376	22,968
Florida	12,548	11,346	10,961	11,190	10,940
Georgia	5,926	6,486	7,126	7,254	9,955
Idaho	143	52	219	32	30
Illinois	246,385	246,844	250,314	258,030	276,617
Indiana	77,855	78,424	81,619	87,560	89,884
Iowa	29,670	30,970	31,733	35,147	35,752
Kansas	32,540	37,590	37,713	44,688	45,984
Kentucky	26,242	26,243	24,809	23,053	25,605
Louisiana	20,174	20,103	20,393	21,097	21,125
Maine	66	99	164	496	451
Maryland	16,565	18,060	24,572	43,041	42,012
Massachusetts	98,595	100,839	102,233	118,002	119,942
Michigan	110,461	121,005	120,665	136,572	131,493
Minnesota	10,743	20,674	30,254	43,609	43,874
Mississippi	4,603	4,717	4,746	4,925	5,417
Missouri	61,530	61,932	62,153	69,509	74,176
Montana	569	589	602	680	697
Nebraska	21,314	21,963	21,754	23,252	23,361
Nevada	32	35	58	73	61
New Hampshire	2,124	2,299	2,359	2,830	2,528
New Jersey	83,623	83,522	85,663	94,505	93,673
New Mexico	1,373	1,308	1,494	1,549	1,409
New York	334,101	337,303	344,357	360,595	365,112
North Carolina	4,440	4,369	4,309	6,983	13,901
North Dakota	2,056	2,211	2,523	2,760	2,779
Ohio	239,057	242,003	237,360	264,700	258,663
Oklahoma	20,500	20,827	21,321	22,334	23,043
Oregon	5,230	5,971	7,929	16,274	21,207
Pennsylvania	301,264	308,848	309,898	323,002	337,901
Rhode Island	19,927	21,833	28,178	30,313	36,752
South Carolina	3,535	3,599	3,822	4,417	5,526
South Dakota	2,640	3,381	3,641	3,863	4,002
Tennessee	11,701	11,449	11,684	11,537	13,829
Texas	63,100	64,385	67,935	72,067	73,829
Utah	0	0	0	0	0
Vermont	0	1	122	124	282
Virginia	27,038	30,013	29,453	40,433	42,572
Washington	1,964	1,982	1,684	4,275	7,523
West Virginia	104,000	106,649	102,521	113,942	112,106
Wisconsin	40,670	41,372	45,890	51,765	50,148
Wyoming	2,734	2,668	2,517	2,810	3,067
Total	2,176,917	2,247,487	2,314,368	2,576,089	2,664,709
Total by water power	1,646,674	1,587,943	1,553,051	1,486,969	1,391,073
Total by water power and fuels	3,823,591	3,835,430	3,867,419	4,063,058	4,055,782

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during September, 1922, are as follows: Alabama, 34,000; Arkansas, 285,000; Florida, 418,000; Georgia, 808,000; Louisiana, 167,000; Michigan, 61,000; Minnesota, 484,000; Mississippi, 552,000; Oregon, 20,944,000; South Carolina, 139,000; Washington, 1,417,000; Wisconsin, 672,000; and all other States (Arizona, California, Idaho, Illinois, Indiana, Maine, Missouri, Montana, New Mexico, and Texas), 2, 688,000.

Electric power produced during May, June, July, August, and September, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons 1922				
	May	June	July	August	September
Alabama	10,221	15,474	25,220	41,598	59,256
Arizona	0	298	178	50	5
Arkansas	8,280	8,072	6,665	4,873	5,385
California	0	0	0	0	0
Colorado	29,457	29,813	29,546	31,494	33,917
Connecticut	50,571	48,444	53,765	60,993	60,818
Delaware	9,013	8,500	8,778	8,853	8,428
District of Columbia	19,353	19,446	19,274	19,296	19,104
Florida	1,809	1,794	1,690	1,715	1,610
Georgia	5,655	6,407	7,145	7,561	11,966
Idaho	0	0	0	0	0
Illinois	324,856	312,222	327,354	339,690	374,252
Indiana	146,013	146,527	152,441	160,632	165,915
Iowa	62,908	63,124	63,462	62,992	68,894
Kansas	13,555	12,128	10,822	13,917	20,924
Kentucky	42,026	41,591	39,981	39,760	41,351
Louisiana	10,260	9,790	7,705	4,936	5,205
Maine	75	25	0	382	466
Maryland	18,947	19,875	25,767	41,226	40,348
Massachusetts	95,597	97,001	98,630	110,748	113,650
Michigan	112,216	122,857	126,735	143,853	138,845
Minnesota	21,721	28,631	34,945	46,619	51,699
Mississippi	7,992	7,972	8,071	7,706	8,893
Missouri	89,977	81,955	74,423	65,203	80,100
Montana	2,710	3,011	3,697	3,591	3,970
Nebraska	30,411	30,698	32,078	24,573	23,777
Nevada	145	160	202	97	0
New Hampshire	2,612	2,982	2,959	3,251	3,025
New Jersey	101,561	99,841	102,881	113,454	109,617
New Mexico	2,817	2,487	2,750	2,698	2,687
New York	346,738	348,573	355,218	378,421	386,926
North Carolina	7,960	8,865	9,775	13,450	23,867
North Dakota	9,945	9,975	10,883	12,090	12,350
Ohio	261,337	261,299	266,796	339,726	292,863
Oklahoma	4,079	6,285	4,738	3,001	4,511
Oregon	124	120	140	140	140
Pennsylvania	376,081	383,274	390,408	417,271	435,603
Rhode Island	8,356	8,734	8,891	9,369	7,789
South Carolina	7,068	7,067	7,675	8,682	10,309
South Dakota	5,764	6,490	5,618	6,906	7,088
Tennessee	20,080	20,101	20,133	19,606	29,842
Texas	16,621	17,097	25,590	24,676	19,368
Utah	0	0	0	0	0
Vermont	0	5	56	107	10
Virginia	33,105	35,225	34,640	45,456	45,703
Washington	240	406	1,263	857	3,213
West Virginia	94,831	95,841	96,466	109,255	110,722
Wisconsin	51,002	47,953	51,281	57,776	56,935
Wyoming	7,034	7,424	6,845	7,135	6,326
Total	2,471,123	2,486,099	2,563,580	2,815,685	2,907,672

State	Natural gas - thousands of cubic feet 1922				
	May	June	July	August	September
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	135,714	128,909	187,985	260,913	281,246
California	125,433	162,835	239,495	519,003	624,056
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	1,877	2,076	1,844	2,365	2,513
Iowa	0	0	0	0	0
Kansas	289,118	371,208	378,769	435,927	345,551
Kentucky	7,855	13,160	16,673	22,531	15,917
Louisiana	87,471	86,440	91,030	93,995	91,932
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,123	1,042	1,066	1,146	1,216
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	18,278	6,401	12,388	20,516	15,460
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	611,579	625,115	655,665	652,524	700,807
Oklahoma	391,765	440,600	451,126	459,018	444,008
Oregon	0	0	0	0	0
Pennsylvania	115,287	71,990	72,374	53,914	56,400
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	176,624	209,417	246,317	279,193	281,199
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	244,595	219,384	246,983	252,121	238,041
Wisconsin	0	0	0	0	0
Wyoming	5,538	5,621	4,478	4,703	4,937
Total	2,212,847	2,344,788	2,606,783	3,058,459	3,103,873

State	Fuel oil - barrels				
	1922				
	May	June	July	August	September
Alabama	4,465	4,048	4,205	3,933	906
Arizona	11,539	13,347	15,212	15,026	14,963
Arkansas	14,001	21,786	22,107	21,676	16,135
California	168,645	171,892	197,441	238,002	236,254
Colorado	0	0	0	0	0
Connecticut	1,759	1,558	1,365	1,622	1,457
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	61,574	58,262	56,266	57,733	57,750
Georgia	19,862	20,303	21,283	21,116	22,055
Idaho	0	0	0	0	0
Illinois	201	247	347	25,123	2,924
Indiana	459	482	429	506	494
Iowa	1,032	969	1,061	12,052	13,547
Kansas	89,280	95,549	112,773	133,223	132,523
Kentucky	433	404	1,641	3,966	376
Louisiana	41,370	43,864	51,949	65,925	61,311
Maine	1,217	443	1,074	2,134	1,974
Maryland	0	0	0	0	0
Massachusetts	35,418	38,705	39,331	44,237	40,547
Michigan	93	77	85	265	262
Minnesota	448	624	702	1,777	3,987
Mississippi	11,601	11,571	11,445	11,430	11,762
Missouri	17,601	51,023	55,888	139,971	110,605
Montana	148	224	220	374	238
Nebraska	16,487	16,998	17,848	47,825	55,965
Nevada	20	10	158	236	227
New Hampshire	0	0	15	0	0
New Jersey	130	131	131	331	150
New Mexico	2,453	2,123	2,523	2,369	2,345
New York	9,739	10,388	13,877	15,612	14,903
North Carolina	206	178	178	100	203
North Dakota	150	150	235	166	293
Ohio	337	338	340	1,340	2,648
Oklahoma	39,761	40,578	46,589	50,201	59,117
Oregon	321	283	823	1,363	2,674
Pennsylvania	141	158	211	233	255
Rhode Island	54,329	62,363	79,025	101,533	106,330
South Carolina	30	50	60	0	60
South Dakota	1,996	2,169	2,151	2,552	2,718
Tennessee	0	0	0	0	0
Texas	238,482	238,595	240,357	266,315	279,907
Utah	0	0	0	0	0
Vermont	0	0	900	947	2,430
Virginia	0	0	0	0	0
Washington	4,831	4,658	3,866	16,851	22,040
West Virginia	16	0	0	0	0
Wisconsin	231	238	242	252	250
Wyoming	5,347	5,174	5,753	5,427	5,530
Total	856,173	919,960	1,010,117	1,313,752	1,486,033

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919-1922

Coal
(Net tons)

Month	1919	1920	1921	1922
January	104,000	115,600	95,900	95,300
February	102,000	111,500	93,900	92,600
March	93,900	105,000	85,200	87,800
April	88,100	97,200	80,600	81,900
May	85,300	91,100	77,900	79,700
June	88,300	95,000	81,360	82,900
July	85,700	94,800	79,400	82,700
August	86,700	97,100	83,200	90,800
September	92,200	100,100	86,300	96,900
October	98,400	101,800	89,000	
November	112,500	105,200	92,600	
December	116,800	103,200.	93,700	
Year	96,200	101,400	86,500	

Oil
(barrels)

Month	1919	1920	1921	1922
January	21,900	41,600	28,900	35,700
February	21,900	40,300	27,900	35,600
March	20,400	34,200	27,400	30,600
April	19,400	30,400	28,100	27,500
May	23,300	29,800	27,500	27,600
June	29,000	35,900	30,500	30,700
July	32,100	38,400	33,200	32,600
August	34,600	38,700	37,600	42,400
September	37,100	40,700	39,700	49,600
October	39,000	37,700	38,100	
November	41,700	32,000	38,200	
December	40,800	30,600	38,400	
Year	30,300	35,900	33,000	

Gas
(M cubic feet)

Month	1919	1920	1921	1922
January	35,500	46,100	55,300	52,700
February	47,100	45,300	52,000	57,100
March	57,000	50,800	50,100	51,600
April	62,000	60,100	62,000	61,700
May	62,100	68,400	64,300	71,400
June	66,200	75,200	69,000	78,200
July	66,400	83,700	62,400	84,100
August	64,500	87,400	74,700	98,700
September	63,400	90,500	78,900	103,500
October	64,400	77,600	73,600	
November	60,700	63,600	73,800	
December	51,000	60,400	63,300	
Year	58,600	67,500	65,000	

The average daily production of electricity by public-utility power plants in September again broke all records. This is the third time in four months that records of output have been surpassed. The daily production of electricity in September was 135,200,000 kilowatt-hours, 3 per cent greater than the August record and nearly 6 per cent greater than the June record.

Owing to the usual seasonal increase in the production of electricity which generally occurs the latter part of each year the average output for each of the remaining months of the year will probably establish a new record. The total output for the period January to September, inclusive, 1922, was 34,340,000,000 kilowatt-hours, an increase of about 15 per cent over the similar period in 1921. Probably the most important factor in producing this unprecedented demand for electricity is the increase in the domestic and commercial load for illumination and power purposes.

The average daily output of electricity and the proportion produced by water power for each month of this year were as follows: January, 123,200,000 kilowatt-hours, 34.0 per cent; February, 123,800,000 kilowatt-hours, 35.2 per cent; March, 123,200,000 kilowatt-hours, 38.5 per cent; April, 119,900,000 kilowatt-hours, 41.4 per cent; May, 123,300,000 kilowatt-hours, 43.1 per cent; June, 127,800,000 kilowatt-hours, 41.4 per cent; July, 124,800,000 kilowatt-hours, 40.2 per cent; August, 131,100,000 kilowatt-hours, 36.6 per cent; and September, 135,200,000 kilowatt-hours, 34.3 per cent.

The daily consumption of both oil and gas in the production of electric power broke all records in August and September, the consumption of these two fuels in September being especially large in comparison with previous months of this year and of the other years of record, indicating an abnormal use of these fuels which has probably been brought about by the difficulty in obtaining coal.

The curves on page 8 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engagged in public service, including central stations, electric railways and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 93 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

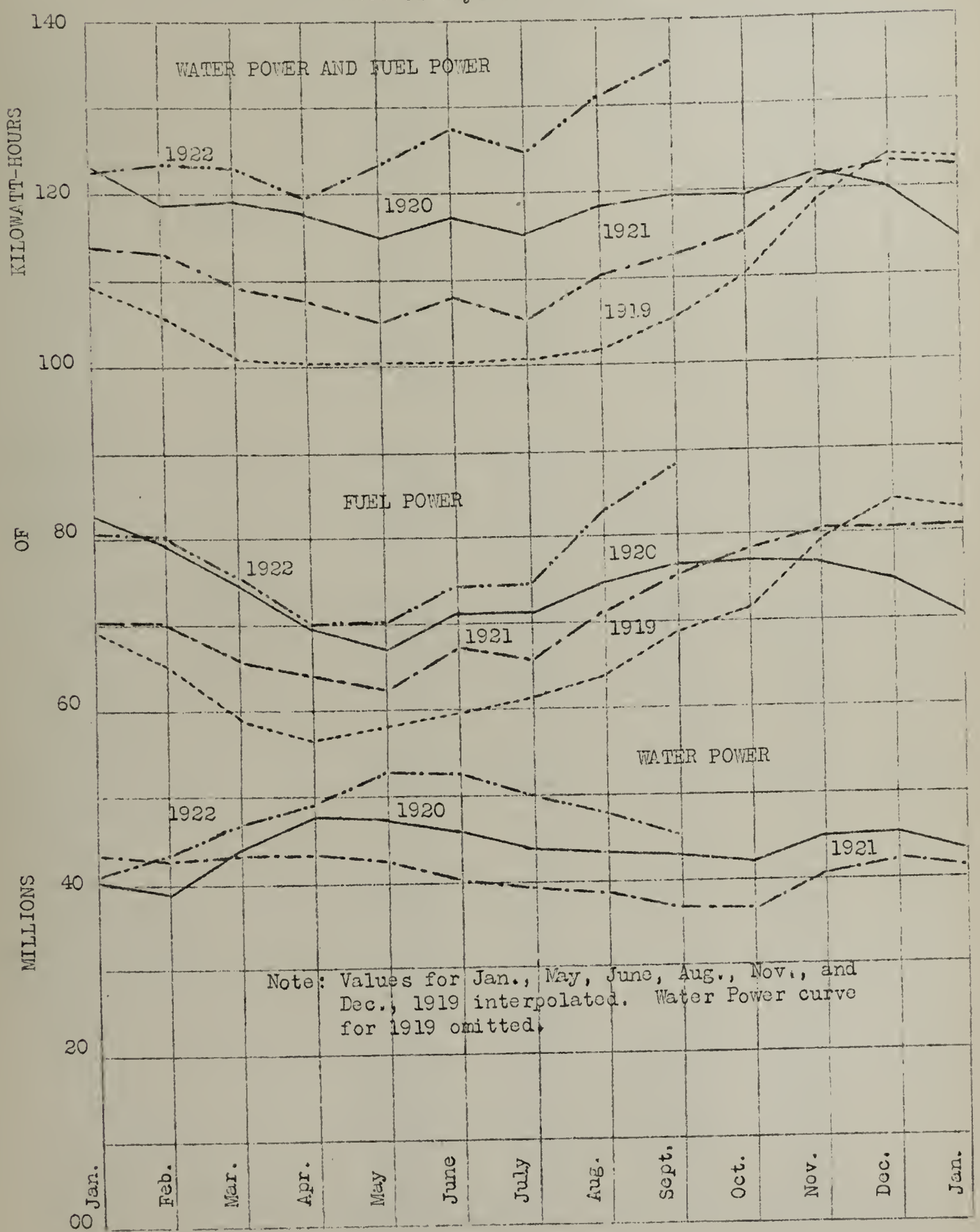
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1919 to 1922

(Average is obtained by dividing the total for the month by the number of days in the month.)



338.705
UN

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — December 4, 1922.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR JUNE, JULY, AUGUST, SEPTEMBER, AND OCTOBER, 1922.

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1922 June	July	August	September	October
Alabama	39,409	28,630	18,259	12,592	13,143
Arizona	11,530	12,367	12,180	11,186	9,029
Arkansas	129	136	163	141	138
California	369,533	375,313	358,366	299,226	293,284
Colorado	15,224	15,704	16,971	14,517	14,629
Connecticut	18,311	14,919	12,994	11,495	9,182
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	707	851	888	964	933
Georgia	45,796	44,817	47,522	43,683	45,235
Idaho	61,615	57,525	56,176	53,335	44,123
Illinois	16,394	16,992	17,550	17,454	16,987
Indiana	5,266	3,505	2,445	2,201	2,578
Iowa	62,116	61,905	54,798	44,816	45,377
Kansas	1,609	2,192	1,148	693	613
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	30,677	31,330	34,308	33,444	35,992
Maryland	241	280	171	110	118
Massachusetts	40,069	35,815	29,369	25,050	22,618
Michigan	57,496	56,945	52,723	54,363	57,856
Minnesota	36,852	32,538	27,480	23,574	21,188
Mississippi	0	0	0	0	0
Missouri	1,358	1,776	1,086	96	97
Montana	82,969	82,439	83,921	80,863	88,260
Nebraska	1,643	1,755	1,737	1,291	1,296
Nevada	2,966	2,940	3,119	3,215	3,438
New Hampshire	18,811	18,909	11,494	9,784	10,275
New Jersey	189	181	135	170	120
New Mexico	83	72	50	45	45
New York	242,493	243,487	259,042	252,283	254,912
North Carolina	29,892	24,390	25,140	26,974	30,339
North Dakota	0	0	0	0	0
Ohio	3,740	2,836	1,426	1,626	1,363
Oklahoma	253	220	99	68	38
Oregon	31,650	29,160	26,847	23,690	25,433
Pennsylvania	56,812	48,397	32,745	31,079	21,045
Rhode Island	579	584	394	582	335
South Carolina	69,511	71,101	72,411	63,375	64,439
South Dakota	950	831	972	794	794
Tennessee	29,986	29,110	30,817	27,706	24,004
Texas	148	182	219	208	209
Utah	10,808	17,558	18,348	17,963	18,962
Vermont	10,847	10,537	13,324	13,289	13,301
Virginia	23,009	22,413	13,803	9,203	10,975
Washington	100,882	104,842	109,062	98,176	96,038
West Virginia	2,712	2,252	1,357	895	692
Wisconsin	53,558	45,166	35,687	38,014	34,498
Wyoming	112	121	138	149	135
Total	1,587,943	1,553,051	1,486,892	1,350,390	1,334,074

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

1922

State	June	July	August	September	October
Alabama	12,292	22,403	38,266	51,183	53,563
Arizona	3,119	3,552	3,397	3,427	3,906
Arkansas	11,062	11,899	12,134	11,894	11,151
California	32,361	41,875	66,688	87,237	88,487
Colorado	17,065	16,729	17,459	19,279	22,592
Connecticut	37,504	40,821	48,204	49,739	57,898
Delaware	6,562	6,605	7,278	7,188	7,596
District of Columbia	23,558	23,666	23,376	22,968	23,839
Florida	11,346	10,961	11,204	10,979	12,152
Georgia	6,486	7,126	7,254	9,960	10,629
Idaho	52	219	32	30	32
Illinois	246,844	250,314	258,029	276,643	300,878
Indiana	78,424	81,619	87,564	89,904	96,171
Iowa	30,970	31,753	35,147	36,145	38,178
Kansas	37,590	37,713	44,667	45,993	48,920
Kentucky	26,243	24,809	23,161	25,581	26,884
Louisiana	20,103	20,393	21,103	21,136	22,229
Maine	99	164	496	451	2,099
Maryland	18,060	24,572	43,041	42,012	55,133
Massachusetts	100,839	102,283	118,101	119,691	141,816
Michigan	121,005	120,665	136,572	131,513	142,372
Minnesota	20,674	30,254	43,609	43,874	53,566
Mississippi	4,717	4,746	4,925	5,383	5,609
Missouri	61,932	62,153	69,509	74,289	83,027
Montana	589	602	680	707	764
Nebraska	21,963	21,754	23,252	23,383	23,779
Nevada	35	58	73	61	60
New Hampshire	2,299	2,359	2,830	2,513	2,766
New Jersey	83,522	85,663	94,505	93,673	103,443
New Mexico	1,308	1,494	1,443	1,400	1,359
New York	337,303	344,357	360,595	365,473	416,612
North Carolina	4,369	4,309	6,997	13,931	14,240
North Dakota	2,211	2,523	2,760	2,793	3,130
Ohio	242,003	237,360	264,700	258,392	282,031
Oklahoma	20,827	21,321	22,211	23,082	24,120
Oregon	5,971	7,929	16,274	21,611	23,816
Pennsylvania	308,848	309,898	326,966	347,747	375,501
Rhode Island	21,833	28,178	30,313	36,752	44,304
South Carolina	3,599	3,822	4,417	5,403	5,523
South Dakota	3,381	3,641	3,863	4,036	4,191
Tennessee	11,449	11,684	11,537	13,856	21,970
Texas	64,385	67,935	72,067	73,777	76,783
Utah	0	0	0	0	0
Vermont	1	122	124	282	280
Virginia	30,013	29,453	40,433	42,361	42,923
Washington	1,982	1,684	4,275	7,540	11,582
West Virginia	106,649	102,521	114,036	112,429	126,549
Wisconsin	41,372	45,890	51,765	50,160	60,937
Wyoming	2,668	2,517	2,810	3,067	3,501
Total	2,247,487	2,314,368	2,580,142	2,690,928	2,978,891
Total by water power	1,587,943	1,553,051	1,486,892	1,350,390	1,334,074
Total by water power and fuels	3,835,430	3,867,419	4,067,034	4,041,318	4,312,965

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during October, 1922, are as follows: Alabama, 31,000; Arkansas, 379,000; Florida, 423,000; Georgia, 619,000; Louisiana, 165,000; Michigan, 78,000; Minnesota, 557,000; Mississippi, 548,000; Oregon, 22,482,000; South Carolina, 85,000; Washington, 1,476,000; Wisconsin, 543,000; and all other States (Arizona, California, Idaho, Indiana, Maine, Missouri, Montana, New Mexico, and Texas), 2,558,000.

Electric power produced during June, July, August, September, and October, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons, 1922				
	June	July	August	September	October
Alabama	15,474	25,220	41,598	56,778	60,058
Arizona	298	178	50	5	60
Arkansas	8,072	6,665	4,833	5,385	7,844
California	0	0	0	0	0
Colorado	29,813	29,546	31,494	33,917	38,426
Connecticut	48,444	53,765	60,993	60,818	69,595
Delaware	8,500	8,778	8,853	8,428	8,988
District of Columbia	19,446	19,274	19,296	19,104	21,355
Florida	1,794	1,690	1,715	1,610	1,300
Georgia	6,407	7,145	7,561	11,923	12,898
Idaho	0	0	0	0	0
Illinois	312,222	327,354	339,664	374,107	406,334
Indiana	146,527	152,441	160,664	166,034	180,928
Iowa	63,124	63,462	62,992	69,030	78,404
Kansas	12,128	10,822	13,917	20,929	36,067
Kentucky	41,591	39,981	40,140	40,448	41,721
Louisiana	9,790	7,705	4,936	5,205	2,721
Maine	25	0	382	466	2,456
Maryland	19,875	25,767	41,226	40,348	50,102
Massachusetts	97,001	98,630	111,140	114,099	133,768
Michigan	122,857	126,735	143,853	138,089	152,325
Minnesota	28,631	34,945	46,619	51,699	63,948
Mississippi	7,972	8,071	7,706	8,922	8,866
Missouri	81,955	74,423	65,203	80,142	111,056
Montana	3,011	3,697	3,591	3,995	4,151
Nebraska	30,698	32,078	24,573	23,897	27,710
Nevada	160	202	97	0	0
New Hampshire	2,982	2,959	3,251	2,967	3,258
New Jersey	99,841	102,881	113,454	109,617	123,496
New Mexico	2,487	2,750	2,823	2,914	3,121
New York	348,573	355,218	378,431	386,950	434,751
North Carolina	8,865	9,775	13,476	23,912	24,331
North Dakota	9,975	10,883	12,090	12,170	14,128
Ohio	261,239	266,796	339,726	236,351	313,772
Oklahoma	6,285	4,738	3,001	4,471	6,850
Oregon	120	140	140	140	146
Pennsylvania	383,274	390,408	416,988	436,023	464,675
Rhode Island	8,734	8,891	9,389	7,789	9,457
South Carolina	7,067	7,675	8,682	10,039	10,081
South Dakota	6,490	5,618	6,906	7,101	7,884
Tennessee	20,101	20,133	19,606	29,949	35,006
Texas	17,097	25,590	24,676	19,105	18,801
Utah	0	0	0	0	0
Vermont	5	56	107	10	32
Virginia	35,225	34,640	45,456	45,289	46,595
Washington	406	1,263	857	3,213	8,484
West Virginia	95,841	96,466	109,362	112,046	120,445
Wisconsin	47,953	51,281	57,776	57,014	72,124
Wyoming	7,424	6,845	7,135	6,326	9,567
Total	2,486,099	2,563,580	2,816,878	2,899,074	3,247,020

State	Fuel oil - barrels 1982				
	June	July	August	September	October
Alabama	4,048	4,205	3,933	3,696	3,543
Arizona	13,347	15,312	15,024	14,980	16,492
Arkansas	21,786	22,107	22,445	15,604	15,703
California	171,892	197,441	233,002	302,272	313,515
Colorado	0	0	0	0	0
Connecticut	1,558	1,365	1,622	1,457	1,710
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	58,262	56,266	57,803	57,911	64,662
Georgia	20,303	21,288	21,116	22,098	23,528
Idaho	0	0	0	0	0
Illinois	247	347	25,123	2,579	1,119
Indiana	482	429	506	494	753
Iowa	969	1,061	12,052	12,521	3,726
Kansas	95,549	112,773	133,274	132,685	122,540
Kentucky	404	1,641	3,966	3,966	3,278
Louisiana	43,864	51,949	66,378	60,618	71,967
Maine	443	1,074	2,134	1,974	5,811
Maryland	0	0	0	0	0
Massachusetts	38,705	39,331	44,559	40,060	45,885
Michigan	77	85	265	262	276
Minnesota	624	702	1,777	3,987	2,139
Mississippi	11,571	11,445	11,430	11,762	11,845
Missouri	51,023	55,888	139,971	111,335	56,099
Montana	224	220	374	239	157
Nebraska	16,998	17,848	47,825	55,938	40,210
Nevada	10	158	236	227	289
New Hampshire	0	15	0	0	0
New Jersey	131	131	331	150	160
New Mexico	2,123	2,523	2,369	2,095	1,961
New York	10,388	13,877	15,612	14,903	25,413
North Carolina	178	178	100	203	219
North Dakota	150	235	166	293	325
Ohio	338	340	1,340	2,648	712
Oklahoma	40,578	46,589	50,201	60,506	48,701
Oregon	283	829	1,383	4,919	8,120
Pennsylvania	158	211	236	349	388
Rhode Island	62,363	79,025	101,538	106,950	129,073
South Carolina	50	60	0	60	50
South Dakota	2,169	2,151	2,552	2,771	3,039
Tennessee	0	0	0	0	0
Texas	238,595	240,357	266,265	279,168	283,464
Utah	0	0	0	0	0
Vermont	0	900	947	2,430	2,430
Virginia	0	0	0	0	95
Washington	4,658	3,866	13,431	22,040	25,534
West Virginia	0	0	0	0	0
Wisconsin	238	242	252	250	253
Wyoming	5,174	5,753	5,427	5,530	6,364
Total	919,960	1,010,117	1,311,945	1,361,930	1,341,548

State	Natural gas - thousands of cubic feet 1922				
	June	July	August	September	October
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	128,909	187,985	260,913	280,934	191,129
California	162,835	239,495	519,003	643,228	610,904
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,076	1,844	2,365	2,513	1,232
Iowa	0	0	0	0	0
Kansas	371,208	378,769	435,927	346,063	168,701
Kentucky	13,160	16,673	22,531	15,917	22,711
Louisiana	86,440	91,030	93,995	91,995	92,339
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,042	1,066	1,146	1,216	1,255
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	6,401	12,388	20,516	15,460	24,778
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	625,115	655,665	652,524	701,207	698,745
Oklahoma	440,600	451,126	456,696	443,105	454,244
Oregon	0	0	0	0	0
Pennsylvania	71,990	72,374	53,914	55,894	54,595
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	209,417	246,317	279,193	281,199	270,337
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	219,384	246,983	252,121	238,041	225,321
Wisconsin	0	0	0	0	0
Wyoming	5,621	4,478	4,703	4,937	10,641
Total	2,344,788	2,606,783	3,056,137	3,122,299	2,827,522

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919-1922

Coal
(Net tons)

Month	1919	1920	1921	1922
January	104,000	115,600	95,900	95,300
February	102,000	111,500	93,900	92,600
March	93,900	105,000	85,200	87,800
April	88,100	97,200	80,600	81,900
May	85,300	91,100	77,900	79,700
June	88,300	95,000	81,360	82,900
July	85,700	94,800	79,400	82,700
August	86,700	97,100	83,200	90,900
September	92,200	100,100	86,300	96,600
October	98,400	101,800	89,000	104,700
November	112,500	103,200	92,600	
December	116,800	103,200	93,700	
Year	96,200	101,400	86,500	

Oil
(barrels)

Month	1919	1920	1921	1922
January	21,900	41,600	28,900	35,700
February	21,900	40,300	27,900	35,600
March	20,400	34,200	27,400	30,600
April	19,400	30,400	28,100	27,500
May	23,300	29,800	27,500	27,600
June	29,000	35,900	30,500	30,700
July	32,100	38,400	33,200	32,600
August	34,600	38,700	37,600	42,300
September	37,100	40,700	39,700	45,400
October	39,000	37,700	38,100	43,300
November	41,700	32,000	38,200	
December	40,800	30,600	38,400	
Year	30,300	35,900	33,000	

Gas
(M cubic feet)

Month	1919	1920	1921	1922
January	35,500	46,100	55,300	52,700
February	47,100	45,300	52,000	57,100
March	57,000	50,800	50,100	51,600
April	62,000	60,100	62,000	61,700
May	62,100	68,400	64,300	71,400
June	66,200	75,200	69,000	78,200
July	66,400	83,700	62,400	84,100
August	64,500	87,400	74,700	98,600
September	63,400	90,500	78,900	104,100
October	64,400	77,600	73,600	91,200
November	60,700	63,600	73,800	
December	51,000	60,400	63,300	
Year	58,600	67,500	65,000	

The average daily production of electricity by public-utility power plants in October, as was predicted last month, broke all records of output, making the fourth time that a record has been established since May. The daily production of electricity in October was 139,100,000 kilowatt-hours,- a little more than 3 per cent greater than the September record and nearly 9 per cent greater than the first record which was established in June. It is expected that the average daily output for November and December will each establish records. The total output for the period January to October, inclusive, was 38,653,000,000 kilowatt-hours,- an increase of more than 15 per cent over the same period for 1921.

The average daily output of electricity and the proportion produced by water power for each month of this year were as follows: January, 123,200,000 kilowatt-hours, 34.0 per cent; February, 123,800,000 kilowatt-hours, 35.2 per cent; March, 123,200,000 kilowatt-hours, 38.5 per cent; April, 119,900,000 kilowatt-hours, 41.4 per cent; May, 123,300,000 kilowatt-hours, 43.1 per cent; June, 127,800,000 kilowatt-hours, 41.4 per cent; July, 124,800,000 kilowatt-hours, 40.2 per cent; August, 131,200,000 kilowatt-hours, 36.6 per cent; September, 134,700,000 kilowatt-hours, 33.4 per cent; and October, 139,100,000 kilowatt-hours, 30.9 per cent.

The use of fuel oil and gas in the production of electricity by public-utility power plants evidently reached a maximum in September as the daily consumption of these two fuels in October decreased from the September figures. This was probably due to the improvement in the coal supply and also to the seasonal change in the consumption of these fuels. Records for previous years show that there is a marked decrease in the use of gas for fuel by public-utility power plants during the winter season and that the consumption of fuel oil remains fairly uniform with perhaps a tendency to decrease during the same period.

The curves on page 8 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

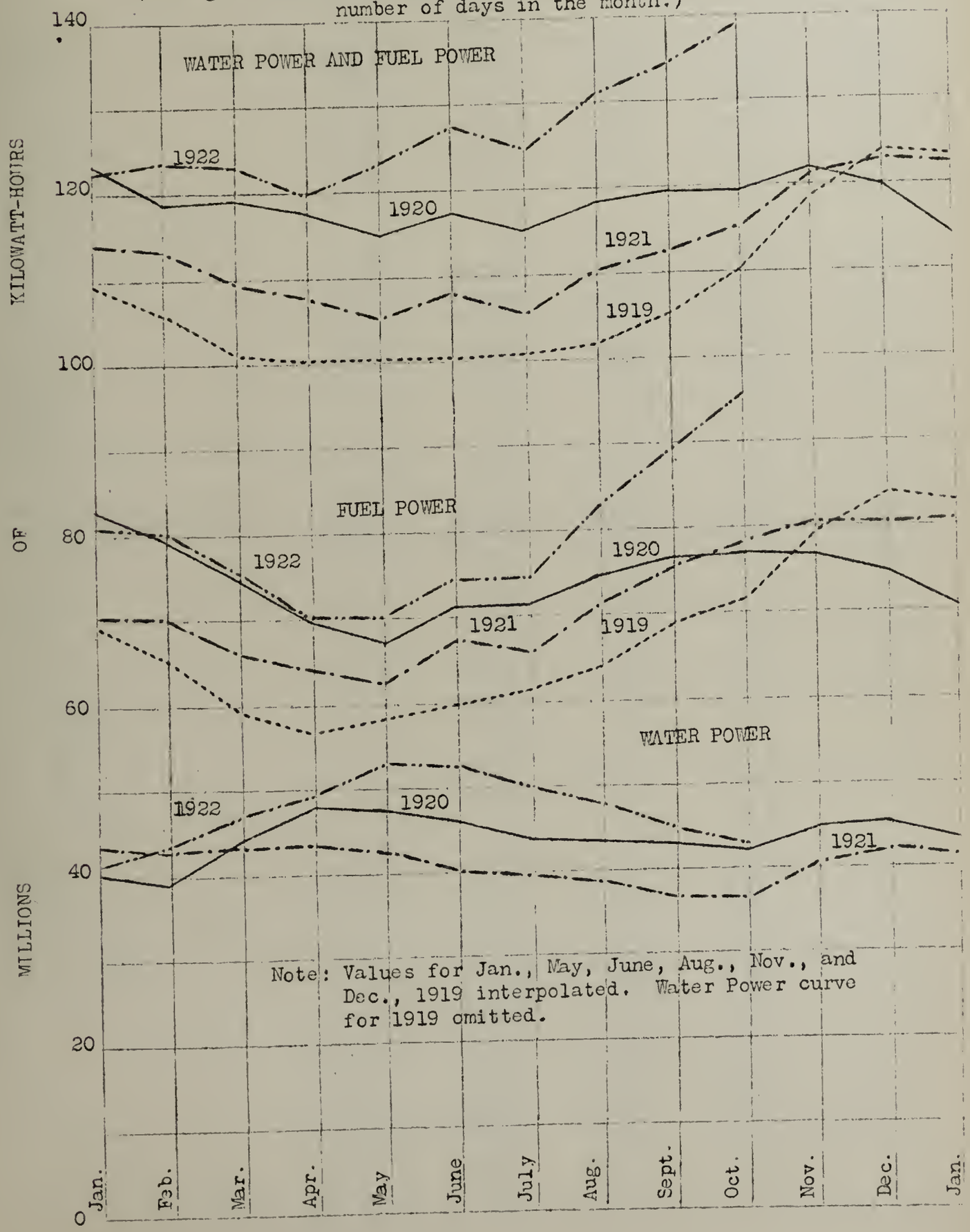
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1919 to 1922

(Average is obtained by dividing the total for the month by the number of days in the month.)



Note: Values for Jan., May, June, Aug., Nov., and Dec., 1919 interpolated. Water Power curve for 1919 omitted.

338.705
UN

Leg Lit

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — January 4, 1923.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR JULY, AUGUST, SEPTEMBER, OCTOBER, AND NOVEMBER, 1922

Compiled by
Division of Power Resources, United States Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1922 July	August	September	October	November
Alabama	28,630	18,259	12,392	13,143	12,983
Arizona	12,367	12,180	11,186	9,029	6,112
Arkansas	156	163	141	138	123
California	375,313	358,366	299,226	302,759	301,156
Colorado	15,704	16,971	14,517	13,248	12,314
Connecticut	14,919	12,994	11,495	9,182	7,365
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	851	882	964	933	900
Georgia	44,317	47,822	43,683	45,235	35,446
Idaho	57,525	56,176	53,335	44,123	46,286
Illinois	16,992	17,550	17,454	17,021	16,726
Indiana	3,505	2,445	2,201	2,573	2,789
Iowa	61,905	54,798	44,316	45,372	49,385
Kansas	2,192	1,148	693	613	1,368
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	31,330	34,308	35,444	36,136	34,635
Maryland	230	171	110	118	95
Massachusetts	35,815	29,369	25,050	22,629	24,385
Michigan	56,945	52,723	54,381	57,867	60,617
Minnesota	32,538	27,480	23,574	21,188	27,814
Mississippi	0	0	0	0	0
Missouri	1,776	1,086	96	97	643
Montana	82,439	83,921	80,863	88,260	90,853
Nebraska	1,755	1,737	1,291	1,296	1,448
Nevada	2,940	3,119	3,215	3,436	3,354
New Hampshire	16,909	11,494	9,809	10,292	10,086
New Jersey	181	135	170	120	93
New Mexico	72	50	45	45	40
New York	243,487	259,042	252,203	255,022	258,763
North Carolina (Revised)	28,295	33,014	34,660	30,281	29,977
North Dakota	0	0	0	0	0
Ohio	2,336	1,426	1,619	1,336	953
Oklahoma	220	99	68	38	121
Oregon	29,160	26,847	23,690	25,501	29,483
Pennsylvania	48,397	32,745	31,079	21,019	17,496
Rhode Island	584	394	502	335	346
South Carolina	71,101	72,411	63,375	74,763	73,830
South Dakota	831	972	794	794	833
Tennessee	29,110	30,817	27,706	24,004	18,796
Texas	182	219	208	209	208
Utah	17,558	18,346	17,963	18,962	19,054
Vermont	10,537	13,324	13,544	13,384	13,013
Virginia	22,413	13,803	9,203	10,893	11,138
Washington	104,842	109,062	98,181	96,298	106,785
West Virginia	2,252	1,357	895	694	400
Wisconsin	45,166	35,687	38,014	32,682	40,631
Wyoming	121	138	149	135	155
Total	1,556,956	1,494,786	1,358,292	1,351,257	1,368,802

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

1922

State	July	August	September	October	November
Alabama	22,403	38,266	51,..83	53,715	53,526
Arizona	3,552	3,397	3,450	3,938	4,002
Arkansas	11,899	12,134	11,894	11,151	11,272
California	41,875	66,688	87,237	79,880	63,148
Colorado	16,729	17,459	19,269	22,609	24,200
Connecticut	40,821	48,304	49,610	57,907	60,974
Delaware	6,605	7,278	7,188	7,596	7,990
District of Columbia	23,666	23,376	22,968	23,839	24,287
Florida	10,961	11,204	10,977	12,282	12,814
Georgia	7,126	7,254	9,960	10,633	13,068
Idaho	219	32	30	168	160
Illinois	250,314	258,029	276,643	303,337	321,707
Indiana	81,619	87,564	89,939	96,688	99,786
Iowa	31,753	35,147	36,145	39,049	38,907
Kansas	37,713	44,667	46,019	48,815	47,598
Kentucky	24,809	23,161	25,581	26,885	27,741
Louisiana	20,393	21,103	21,136	22,229	21,983
Maine	164	496	451	2,099	3,003
Maryland	24,572	43,041	42,012	55,167	57,472
Massachusetts	102,283	118,101	119,691	142,323	150,947
Michigan	120,665	136,572	131,512	142,389	140,231
Minnesota	30,254	43,609	43,879	54,067	47,549
Mississippi	4,746	4,925	5,383	5,566	5,396
Missouri	62,153	69,509	74,289	83,171	81,600
Montana	602	680	707	764	798
Nebraska	21,754	23,252	23,386	23,778	23,165
Nevada	58	73	61	60	60
New Hampshire	2,359	2,830	2,513	2,766	3,016
New Jersey	85,663	94,505	93,673	102,459	105,152
New Mexico	1,494	1,443	1,400	1,359	1,361
New York	344,357	360,595	365,473	416,683	427,502
North Carolina	4,309	6,997	13,931	15,832	19,473
North Dakota	2,523	2,760	2,791	3,130	3,284
Ohio	237,360	264,700	258,413	282,106	285,764
Oklahoma	21,321	22,211	23,082	24,580	25,402
Oregon	7,929	16,274	21,611	23,759	19,537
Pennsylvania	309,898	326,966	347,747	376,222	390,628
Rhode Island	28,173	30,313	36,752	44,304	47,196
South Carolina	3,822	4,417	5,403	5,745	7,004
South Dakota	3,641	3,863	4,036	4,206	4,189
Tennessee	11,684	11,537	13,856	21,972	29,150
Texas	67,935	72,067	73,777	76,878	75,923
Utah	0	0	0	0	0
Vermont	122	124	282	350	102
Virginia	29,453	40,433	42,361	43,015	48,250
Washington	1,684	4,275	7,555	11,592	4,523
West Virginia	102,521	114,036	112,429	126,646	125,652
Wisconsin	45,890	51,765	50,160	61,439	59,699
Wyoming	2,517	2,310	3,067	3,501	3,602
Total	2,314,368	2,580,142	2,690,912	2,978,649	3,029,793
Total by water power	1,556,956	1,494,766	1,358,292	1,351,257	1,368,802
Total by water power and fuels	3,871,324	4,074,908	4,049,204	4,329,906	4,398,595

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during November, 1922, are as follows: Alabama, 36,000; Arkansas, 330,000; Florida, 279,000; Georgia, 930,000; Louisiana, 159,000; Michigan, 81,000; Minnesota, 582,000; Mississippi, 977,000; Oregon, 17,682,000; South Carolina, 100,000; Washington, 1,555,000; Wisconsin, 841,000; and all other States (Arizona, California, Idaho, Indiana, Maine, Missouri, Montana, New Mexico, and Texas), 2,696,000.

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919-1922

Coal
(Net tons)

Month	1919	1920	1921	1922
January	104,000	115,600	95,900	95,300
February	102,000	111,500	93,900	92,600
March	93,900	105,000	85,200	87,800
April	88,100	97,200	80,600	81,900
May	85,300	91,100	77,900	79,700
June	88,300	95,000	81,360	82,900
July	85,700	94,800	79,400	82,700
August	86,700	97,100	83,200	90,900
September	92,200	100,100	86,300	96,600
October	98,400	101,800	89,000	105,800
November	112,500	105,200	92,600	111,000
December	116,800	103,200	93,700	
Year	96,200	101,400	86,500	

Oil
(barrels)

Month	1919	1920	1921	1922
January	21,900	41,600	28,900	35,700
February	21,900	40,300	27,900	35,600
March	20,400	34,200	27,400	30,600
April	19,400	30,400	28,100	27,500
May	25,300	29,800	27,500	27,600
June	29,000	35,900	30,500	30,700
July	32,100	38,400	33,200	32,600
August	34,600	38,700	37,600	42,300
September	37,100	40,700	39,700	45,400
October	39,000	37,700	38,100	42,000
November	41,700	32,000	38,200	41,500
December	40,900	30,600	38,400	
Year	30,300	35,900	33,000	

Gas
(M cubic feet)

Month	1919	1920	1921	1922
January	35,500	46,100	55,300	52,700
February	47,100	45,300	52,000	57,100
March	57,000	50,800	50,100	51,600
April	62,000	60,100	62,000	61,700
May	62,100	68,400	64,300	71,400
June	66,200	75,200	69,000	78,200
July	66,400	83,700	62,400	84,100
August	64,500	87,400	74,700	98,600
September	63,400	90,500	78,900	104,200
October	64,400	77,600	73,600	91,400
November	60,700	63,600	73,800	80,300
December	51,000	60,400	63,300	
Year	58,600	67,500	65,000	

Electric power produced during July, August, September, October, and November, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons 1922				
	July	August	September	October	November
Alabama	25,220	41,593	36,630	60,281	60,187
Arizona	178	50	5	60	35
Arkansas	6,665	4,333	5,385	7,644	8,621
California	0	0	0	0	0
Colorado	29,546	31,494	33,902	38,462	39,396
Connecticut	53,765	60,993	60,719	69,617	71,721
Delaware	8,778	8,853	8,428	8,988	8,334
District of Columbia	19,274	19,256	19,104	21,355	20,706
Florida	1,690	1,715	1,610	1,300	1,368
Georgia	7,145	7,561	11,923	13,898	16,807
Idaho	0	0	0	0	0
Illinois	327,354	339,664	374,107	411,907	420,102
Indiana	152,441	160,664	166,132	187,863	191,281
Iowa	63,462	62,992	69,030	83,006	84,972
Kansas	10,822	13,917	21,011	36,157	35,912
Kentucky	39,981	40,140	40,448	41,721	44,152
Louisiana	7,705	4,936	5,205	2,721	2,117
Maine	0	382	466	2,456	3,303
Maryland	25,767	41,226	40,348	50,327	51,103
Massachusetts	98,630	111,140	114,099	134,214	134,454
Michigan	126,735	143,853	138,083	152,406	150,069
Minnesota	34,945	46,619	51,684	64,685	59,770
Mississippi	8,071	7,706	8,922	8,771	8,199
Missouri	74,423	65,203	80,142	112,906	119,111
Montana	3,697	3,391	3,995	4,151	4,423
Nebraska	32,073	24,573	23,897	27,728	22,829
Nevada	202	97	0	0	0
New Hampshire	2,959	3,251	2,967	3,258	3,562
New Jersey	102,681	113,454	109,617	120,798	121,795
New Mexico	2,750	2,823	2,914	3,121	3,235
New York	355,218	378,421	386,950	436,029	439,989
North Carolina	9,775	13,476	23,912	23,516	26,953
North Dakota	10,883	12,090	12,460	14,126	19,279
Ohio	266,796	339,726	286,376	313,694	324,649
Oklahoma	4,738	3,001	4,471	6,455	7,107
Oregon	140	140	140	146	135
Pennsylvania	390,408	416,968	436,023	474,056	474,073
Rhode Island	8,891	9,369	7,739	9,437	8,936
South Carolina	7,675	8,682	10,039	10,571	12,026
South Dakota	5,618	6,906	7,101	8,163	8,112
Tennessee	20,133	19,606	29,949	35,019	46,193
Texas	25,590	24,676	19,105	18,596	17,564
Utah	0	0	0	0	0
Vermont	56	107	10	46	22
Virginia	34,640	45,456	45,289	46,792	49,558
Washington	1,263	857	3,213	8,484	3,836
West Virginia	96,466	109,862	112,046	120,749	122,774
Wisconsin	51,281	57,776	57,014	72,910	72,831
Wyoming	6,845	7,135	6,326	9,567	8,277
Total	2,563,580	2,816,376	2,893,936	3,277,357	3,329,948

State	Fuel oil - barrels				
	1922				
	July	August	September	October	November
Alabama	4,205	3,933	3,696	3,247	3,242
Arizona	15,212	15,024	15,269	16,924	18,340
Arkansas	22,107	22,445	15,604	15,703	20,916
California	197,441	238,002	302,272	280,385	264,497
Colorado	0	0	0	0	0
Connecticut	1,365	1,322	1,457	1,710	1,347
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	56,266	57,803	57,463	64,408	68,209
Georgia	21,266	21,116	22,096	23,588	22,374
Idaho	0	0	0	0	0
Illinois	347	25,123	2,590	1,144	949
Indiana	429	306	494	753	564
Iowa	1,061	12,052	12,521	3,726	2,311
Kansas	112,773	135,874	132,582	125,398	120,352
Kentucky	1,641	3,966	3,966	3,278	3,593
Louisiana	51,949	66,378	60,618	71,967	69,498
Maine	1,074	2,134	1,974	5,811	8,674
Maryland	0	0	0	0	0
Massachusetts	39,331	44,559	40,060	43,874	48,718
Michigan	85	265	262	276	617
Minnesota	702	1,777	3,987	2,139	1,834
Mississippi	11,445	11,430	11,762	11,345	13,227
Missouri	55,686	139,971	111,335	52,385	27,895
Montana	220	374	239	157	223
Nebraska	17,648	47,625	55,662	40,210	32,402
Nevada	156	236	227	289	290
New Hampshire	15	0	0	0	0
New Jersey	131	331	150	160	348
New Mexico	2,523	2,369	2,095	1,961	1,766
New York	13,877	15,612	14,903	25,413	25,732
North Carolina	178	100	206	319	249
North Dakota	235	166	293	325	331
Ohio	340	1,340	2,659	750	350
Oklahoma	46,569	30,201	60,506	48,533	47,419
Oregon	629	1,363	4,919	8,120	8,764
Pennsylvania	211	236	349	366	384
Rhode Island	79,025	101,536	106,950	129,073	137,423
South Carolina	60	0	60	50	50
South Dakota	2,151	2,552	2,771	2,797	2,633
Tennessee	0	0	0	0	0
Texas	240,357	266,265	279,168	282,476	274,693
Utah	0	0	0	0	0
Vermont	900	947	2,430	2,863	1,022
Virginia	0	0	0	95	89
Washington	3,366	13,431	22,040	25,534	9,735
West Virginia	0	0	0	0	0
Wisconsin	242	252	250	253	257
Wyoming	5,753	5,427	5,277	6,091	5,292
Total	1,010,117	1,311,945	1,361,337	1,302,360	1,243,349

State	Natural gas - thousands of cubic feet 1922				
	July	August	September	October	November
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	187,985	260,913	280,934	191,129	178,037
California	239,495	519,003	643,228	610,904	318,048
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	1,844	2,365	2,513	1,232	2,095
Iowa	0	0	0	0	0
Kansas	378,769	435,927	348,323	164,870	162,285
Kentucky	16,673	22,531	15,917	22,711	24,330
Louisiana	91,030	93,995	91,995	92,339	98,290
Maine	0	0	0	0	0
Maryland	590	590	590	590	590
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,066	1,146	1,216	1,255	1,223
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	12,388	20,516	15,460	24,774	15,995
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	655,665	652,524	701,307	698,745	593,027
Oklahoma	451,126	456,696	443,105	463,469	467,135
Oregon	0	0	0	0	0
Pennsylvania	72,374	53,914	55,894	58,014	67,657
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	246,317	279,193	281,199	270,337	260,084
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	246,983	252,121	238,041	225,676	207,080
Wisconsin	0	0	0	0	0
Wyoming	4,478	4,703	4,937	10,641	11,796
Total	2,606,783	3,056,137	3,125,059	2,833,686	2,407,672

The average daily production of electricity by public-utility power plants in November, as predicted, broke all records of output, making the fifth time that a record has been established since May. The average daily production of electricity in November was 146,600,000 kilowatt-hours, -- nearly 5 per cent greater than the October record and about 14.5 per cent greater than the first record established in June. The total output for the period January to November, inclusive, was 43,069,000,000 kilowatt-hours, -- an increase of more than 16 per cent over the same period for 1921.

The average daily output of electricity and the proportion produced by water power for each month of this year were as follows: January, 122,900,000 kilowatt-hours, 34.0 per cent; February, 133,900,000 kilowatt-hours, 35.3 per cent; March, 126,300,000 kilowatt-hours, 33.5 per cent; April, 130,000,000 kilowatt-hours, 41.4 per cent; May, 133,400,000 kilowatt-hours, 43.1 per cent; June, 127,900,000 kilowatt-hours, 41.5 per cent; July, 124,900,000 kilowatt-hours, 40.2 per cent; August, 131,400,000 kilowatt-hours, 36.7 per cent; September, 135,000,000 kilowatt-hours, 33.5 per cent; October, 139,700,000 kilowatt-hours, 31.2 per cent; and November, 146,600,000 kilowatt-hours, 31.1 per cent.

The curves on page 8 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date. The curve showing the production of electricity by the use of water power in 1922 shows an increase for November as compared with October, indicating that the usual moderate seasonal increase in the flow of streams is taking place.

An examination of the table showing the average daily consumption of fuels by electric public-utility plants shows that the fuel consumed in November, 1919, and in November, 1922, was very nearly the same. The production of electricity, however, in November, 1922, was about 25 per cent greater than in November, 1919, indicating a remarkable increase in efficiency in the utilization of fuels and in plant operation during the past three years. This represents the saving of about 750,000 tons of coal and its equivalent in other fuels in a single month, as compared with November, 1919.

The quantities in the tables are based on returns received from about 3,300 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

The figures for production of electricity by water power for North Carolina have been revised as follows: January, 25,407,000 kilowatt-hours; February, 21,978,000 kilowatt-hours; March, 25,595,000 kilowatt-hours; April, 27,600,000 kilowatt-hours; May, 33,744,000 kilowatt-hours; and June, 31,577,000 kilowatt-hours.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

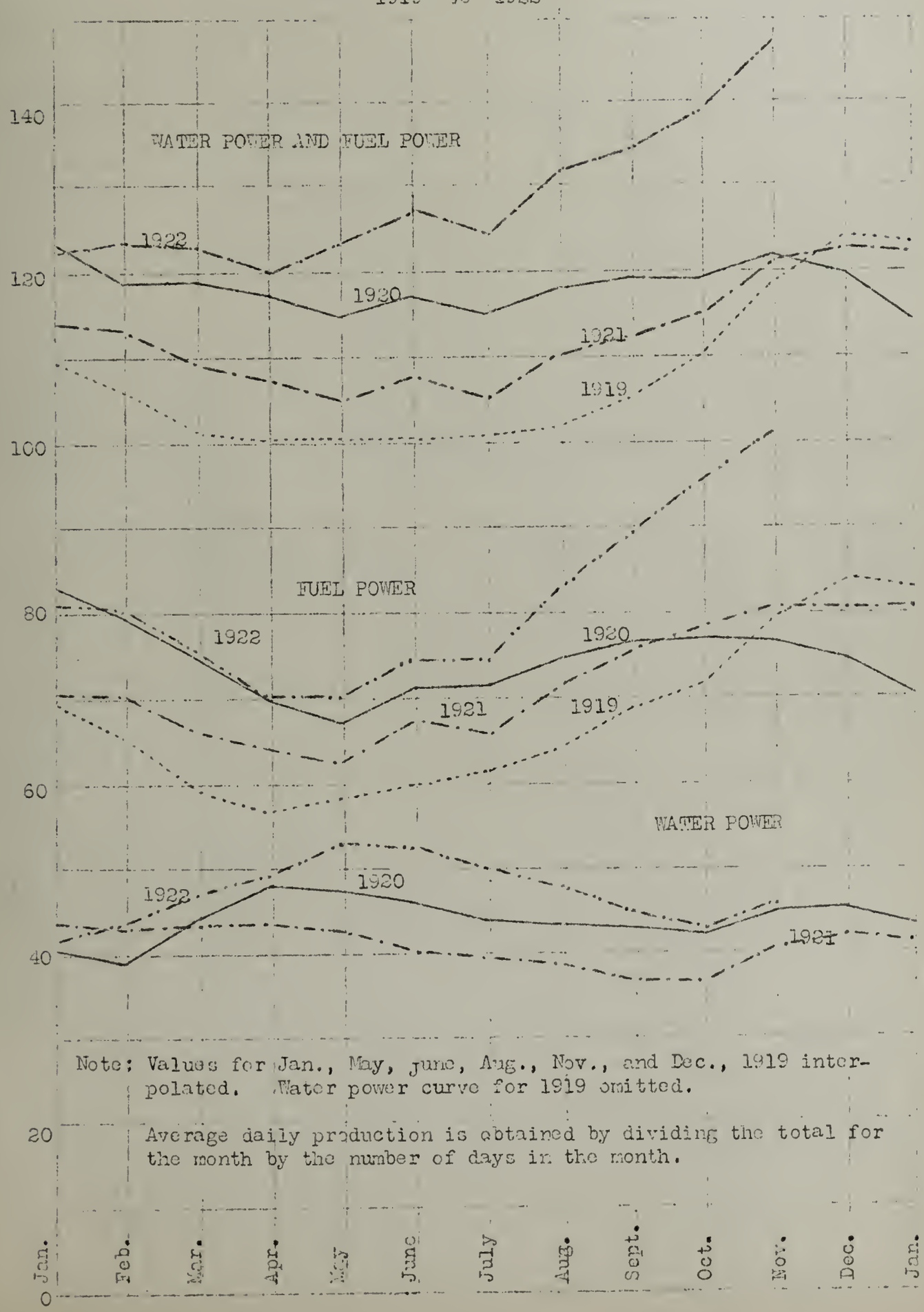
Prepared under the direction of A. H. Horton

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1919 to 1922



Note: Values for Jan., May, June, Aug., Nov., and Dec., 1919 interpolated. Water power curve for 1919 omitted.

Average daily production is obtained by dividing the total for the month by the number of days in the month.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — February 3, 1923.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1922

Compiled by
Division of Power Resources, United States Geological Survey

THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER 1922

State	August	September	October	November	December
Alabama	16,239	12,393	13,143	11,559	25,145
Arizona	12,180	11,186	9,039	6,112	4,983
Arkansas	163	141	136	123	133
California	358,366	299,226	302,739	300,086	312,721
Colorado	16,971	14,517	13,248	12,819	13,313
Connecticut	12,994	11,495	9,132	7,365	5,946
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	388	964	933	900	758
Georgia	47,522	43,633	45,235	35,406	36,015
Idaho	56,176	53,335	44,123	45,540	46,766
Illinois	17,550	17,454	17,021	16,856	16,465
Indiana	2,445	2,301	2,573	2,803	3,077
Iowa	54,798	44,316	45,378	49,385	41,919
Kansas	1,148	693	613	1,366	919
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	34,306	33,444	36,135	35,367	34,919
Maryland	171	110	118	98	151
Massachusetts	29,389	25,050	22,526	33,134	13,840
Michigan	52,723	54,331	57,942	60,674	56,019
Minnesota	27,480	23,574	21,168	27,613	19,180
Mississippi	0	0	0	0	0
Missouri	1,086	96	97	646	3,114
Montana	83,921	80,863	88,260	90,830	98,942
Nebraska	1,737	1,291	1,296	1,448	932
Nevada	3,119	3,215	3,438	3,353	3,679
New Hampshire	11,494	9,809	10,292	10,358	7,532
New Jersey	135	170	120	93	113
New Mexico	50	45	45	40	38
New York	259,042	252,203	256,971	263,056	267,400
North Carolina	35,014	34,660	29,300	29,977	21,033
North Dakota	0	0	0	0	0
Ohio	1,426	1,619	1,356	938	1,867
Oklahoma	99	68	38	121	113
Oregon	26,847	23,690	25,501	29,551	31,267
Pennsylvania	32,745	31,079	21,015	17,527	22,232
Rhode Island	394	582	335	346	318
South Carolina	72,411	63,375	74,783	69,632	73,504
South Dakota	972	794	794	833	614
Tennessee	30,317	27,706	24,004	18,796	36,185
Texas	219	208	209	208	187
Utah	13,348	17,963	16,964	20,663	20,633
Vermont	13,324	13,544	13,384	11,527	10,051
Virginia	13,803	9,203	10,393	11,136	13,662
Washington	109,062	96,181	96,296	106,010	104,440
West Virginia	1,357	695	694	388	1,704
Wisconsin	35,687	38,014	32,662	40,631	34,387
Wyoming	139	149	135	155	152
Total	1,494,766	1,358,292	1,352,495	1,366,988	1,390,384

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

1922

State	August	September	October	November	December
Alabama	38,266	51,133	53,715	62,460	40,853
Arizona	3,397	3,450	3,938	4,002	4,051
Arkansas	12,134	11,894	11,151	11,272	11,592
California	66,686	87,237	79,880	59,664	50,366
Colorado	17,459	19,269	22,609	24,194	27,432
Connecticut	48,204	49,610	57,907	61,039	66,547
Delaware	7,278	7,183	7,596	7,990	8,116
District of Columbia	23,376	22,968	23,839	24,287	26,872
Florida	11,204	10,977	12,769	13,360	14,740
Georgia	7,254	9,960	10,633	13,068	11,239
Idaho	32	30	168	160	179
Illinois	258,029	276,643	303,337	319,972	331,063
Indiana	87,564	89,939	96,688	99,810	103,939
Iowa	35,147	36,145	39,049	38,889	41,367
Kansas	44,667	46,019	48,905	47,621	47,004
Kentucky	23,161	25,581	26,885	27,762	29,781
Louisiana	21,103	21,136	22,229	22,011	23,420
Maine	496	451	2,099	3,615	7,341
Maryland	43,041	42,012	55,172	57,477	58,307
Massachusetts	118,101	119,691	142,323	152,928	180,354
Michigan	136,372	131,512	142,389	140,231	149,207
Minnesota	43,609	43,879	54,047	47,539	54,246
Mississippi	4,925	5,383	5,557	5,391	5,362
Missouri	69,309	74,289	83,183	81,639	93,221
Montana	680	707	764	798	807
Nebraska	23,252	23,386	23,700	23,185	25,207
Nevada	73	61	60	63	63
New Hampshire	2,830	2,513	2,766	3,016	4,661
New Jersey	94,505	93,673	102,474	105,187	113,840
New Mexico	1,445	1,400	1,359	1,361	1,447
New York	360,595	365,473	416,683	427,570	468,332
North Carolina	6,997	13,931	16,432	19,473	13,192
North Dakota	2,760	2,791	3,130	3,286	3,510
Ohio	264,700	256,413	282,118	285,907	293,470
Oklahoma	22,211	23,082	24,601	25,135	25,924
Oregon	16,274	21,611	23,759	19,010	18,428
Pennsylvania	326,966	347,747	376,263	394,963	418,183
Rhode Island	30,315	36,752	44,304	47,196	52,064
South Carolina	4,417	5,403	5,745	6,912	5,890
South Dakota	3,863	4,036	4,206	4,191	4,733
Tennessee	11,337	13,856	21,972	29,155	14,584
Texas	72,067	73,777	76,883	75,906	77,968
Utah	0	0	0	0	0
Vermont	124	282	350	102	514
Virginia	40,433	42,361	43,015	48,250	44,041
Washington	4,275	7,555	11,592	5,632	16,576
West Virginia	114,036	112,429	126,646	126,138	126,655
Wisconsin	51,765	50,160	61,439	60,244	63,481
Wyoming	2,810	3,067	3,501	3,631	4,021
Total	2,580,142	2,690,913	2,979,910	3,042,892	3,184,190
Total by water power	1,494,766	1,358,292	1,352,495	1,366,988	1,390,384
Total by water power and fuels	4,074,908	4,049,204	4,332,405	4,409,880	4,574,574

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during December, 1922, are as follows: Alabama, 47,000; Arkansas, 337,000; Florida, 279,000; Georgia, 790,000; Louisiana, 137,000; Michigan, 37,000; Minnesota, 561,000; Mississippi, 959,000; Oregon, 15,934,000; South Carolina, 244,000; Washington, 4,181,000; Wisconsin, 271,000; and all other States (Arizona, California, Idaho, Indiana, Maine, Missouri, Montana, New Mexico, and Texas), 2,135,000.

Electric power produced during August, September, October, November, and December, 1922, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons 1922				
	August	September	October	November	December
Alabama	41,598	56,630	60,281	68,217	46,915
Arizona	50	5	60	35	0
Arkansas	4,833	5,385	7,844	8,621	9,575
California	0	0	0	0	0
Colorado	31,494	33,902	38,462	39,341	39,935
Connecticut	60,993	60,719	69,817	71,725	81,957
Delaware	8,853	8,428	8,986	8,334	9,512
District of Columbia	19,296	19,104	21,355	20,706	23,172
Florida	1,715	1,810	1,300	1,368	1,538
Georgia	7,561	11,933	12,893	16,753	13,919
Idaho	0	0	0	0	0
Illinois	339,664	374,107	411,907	418,899	461,494
Indiana	180,864	186,132	187,863	191,285	196,837
Iowa	82,993	89,030	82,861	84,757	96,739
Kansas	13,917	21,011	32,389	32,342	29,665
Kentucky	40,140	40,413	41,721	44,252	45,686
Louisiana	4,936	5,205	2,721	2,117	2,479
Maine	382	486	2,456	3,578	4,520
Maryland	41,226	40,348	50,467	51,285	53,662
Massachusetts	111,140	114,099	134,214	136,073	171,689
Michigan	143,853	138,083	152,406	150,129	159,992
Minnesota	46,619	51,684	64,630	59,618	72,478
Mississippi	7,706	8,932	8,751	8,079	8,231
Missouri	65,203	80,142	112,906	119,341	140,326
Montana	3,591	3,995	4,151	4,423	4,517
Nebraska	24,573	23,397	27,903	32,702	35,174
Nevada	97	0	0	0	0
New Hampshire	3,251	2,967	3,253	3,582	5,492
New Jersey	113,454	109,617	120,318	121,834	129,520
New Mexico	2,623	2,914	3,121	3,235	3,152
New York	378,421	386,950	436,029	440,039	474,390
North Carolina	13,476	23,912	24,701	26,953	20,605
North Dakota	12,090	12,480	14,128	19,279	22,066
Ohio	339,726	386,376	313,749	324,623	342,851
Oklahoma	3,001	4,471	6,455	7,121	6,816
Oregon	140	140	146	135	150
Pennsylvania	416,968	436,023	474,055	478,333	519,902
Rhode Island	9,369	7,709	9,437	8,986	10,402
South Carolina	8,682	10,039	10,571	11,926	10,532
South Dakota	6,906	7,101	8,163	8,114	9,391
Tennessee	19,606	29,949	35,019	46,083	26,139
Texas	24,576	19,105	18,637	17,483	21,635
Utah	0	0	0	0	0
Vermont	107	10	46	22	95
Virginia	45,456	45,289	46,792	49,558	50,235
Washington	857	3,213	8,484	3,636	7,292
West Virginia	109,362	112,046	120,749	123,562	123,435
Wisconsin	57,776	57,014	72,910	73,775	81,022
Wyoming	7,135	6,326	9,567	8,317	10,412
Total	2,818,273	2,898,986	3,275,204	3,350,761	3,586,346

State	Fuel oil - barrels 1922				
	August	September	October	November	December
Alabama	3,933	3,696	3,347	3,242	1,034
Arizona	15,024	15,339	16,934	18,340	18,884
Arkansas	22,445	15,804	18,703	20,516	20,344
California	293,003	302,372	280,535	254,718	301,353
Colorado	0	0	0	0	0
Connecticut	1,932	1,457	1,710	1,247	933
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	57,803	57,463	68,778	72,990	79,565
Georgia	21,116	22,096	23,526	22,374	22,876
Idaho	0	0	0	0	0
Illinois	25,125	2,590	1,144	921	934
Indiana	506	494	753	554	672
Iowa	12,052	13,521	3,051	2,423	3,301
Kansas	133,274	132,538	127,245	124,160	129,973
Kentucky	3,966	3,966	3,376	3,593	3,401
Louisiana	66,376	60,718	71,907	70,397	74,330
Maine	2,134	1,974	5,311	10,377	21,604
Maryland	0	0	0	0	0
Massachusetts	44,539	40,060	43,674	50,441	53,040
Michigan	265	262	273	617	904
Minnesota	1,777	3,907	2,139	1,911	1,579
Mississippi	11,430	11,762	11,360	12,342	12,567
Missouri	139,971	111,335	52,307	27,350	40,295
Montana	374	239	157	223	196
Nebraska	47,325	55,332	38,460	20,994	23,311
Nevada	236	227	239	210	210
New Hampshire	0	0	0	0	0
New Jersey	331	150	160	348	139
New Mexico	2,369	2,095	1,961	1,766	1,610
New York	15,613	14,903	25,413	25,766	16,755
North Carolina	100	203	219	249	200
North Dakota	166	293	325	331	280
Ohio	1,340	3,659	750	369	362
Oklahoma	30,201	60,506	48,533	30,286	51,717
Oregon	1,363	4,919	8,120	8,169	19,238
Pennsylvania	336	549	432	451	533
Rhode Island	101,533	106,930	129,073	137,423	150,654
South Carolina	0	60	50	50	50
South Dakota	2,552	2,771	2,797	2,637	2,934
Tennessee	0	0	0	95	95
Texas	266,365	279,168	282,475	274,659	279,663
Utah	0	0	0	0	0
Vermont	947	2,430	2,863	1,022	3,999
Virginia	0	0	95	69	74
Washington	13,431	22,040	25,534	9,785	12,546
West Virginia	0	0	0	0	0
Wisconsin	252	250	253	257	260
Wyoming	5,427	5,277	6,091	5,292	7,943
Total	1,311,945	1,361,387	1,308,836	1,239,904	1,311,676

State	Natural gas - thousands of cubic feet 1923				
	August	September	October	November	December
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	260,913	280,934	191,128	178,037	158,599
California	519,003	645,228	610,904	518,048	159,178
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,365	2,513	1,232	2,095	1,926
Iowa	0	0	0	0	0
Kansas	435,927	348,823	164,961	155,797	156,982
Kentucky	22,531	15,917	22,711	24,330	22,573
Louisiana	93,995	91,995	92,339	98,290	101,103
Maine	0	0	0	0	0
Maryland	590	590	0	0	0
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,146	1,216	1,255	1,223	1,292
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	20,516	15,460	24,774	16,185	15,620
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	552,534	701,207	698,745	593,171	408,175
Oklahoma	453,696	443,105	464,123	448,351	439,437
Oregon	0	0	0	0	0
Pennsylvania	53,914	55,894	55,014	67,844	59,541
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	279,193	281,199	270,337	260,084	227,183
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	252,121	238,041	225,676	207,633	163,628
Wisconsin	0	0	0	0	0
Wyoming	4,703	4,937	10,641	11,796	10,898
Total	3,056,137	3,125,059	2,833,831	2,383,084	1,926,135

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919-1922

Coal
(Net tons)

Month	1919	1920	1921	1922
January	104,000	115,600	95,900	95,300
February	102,000	111,500	93,900	92,600
March	93,900	105,000	85,200	87,800
April	88,100	97,200	80,600	81,900
May	85,300	91,100	77,900	79,700
June	88,300	95,000	81,360	82,900
July	85,700	94,800	79,400	82,700
August	86,700	97,100	83,200	90,900
September	92,200	100,100	86,300	96,600
October	98,400	101,800	89,000	105,700
November	112,500	105,200	92,600	111,700
December	116,800	103,200	93,700	112,500
Year	96,200	101,400	86,500	93,600

Oil
(barrels)

Month	1919	1920	1921	1922
January	21,900	41,600	28,900	35,700
February	21,900	40,300	27,900	35,600
March	20,400	34,200	27,400	30,600
April	19,400	30,400	28,100	27,500
May	23,300	29,800	27,500	27,600
June	29,000	35,900	30,500	30,700
July	32,100	38,400	33,200	32,600
August	34,600	38,700	37,600	42,300
September	37,100	40,700	39,700	45,400
October	39,000	37,700	38,100	42,200
November	41,700	32,000	38,200	41,300
December	40,800	30,600	38,400	42,300
Year	30,300	35,900	33,000	36,200

Gas
(M cubic feet)

Month	1919	1920	1921	1922
January	35,500	46,100	55,300	52,700
February	47,100	45,300	52,000	57,100
March	57,000	50,800	50,100	51,600
April	62,000	60,100	62,000	61,700
May	62,100	68,400	64,300	71,400
June	66,200	75,200	69,000	78,200
July	66,400	83,700	62,400	84,100
August	64,500	87,400	74,700	98,600
September	63,400	90,500	78,900	104,200
October	64,400	77,600	73,600	91,400
November	60,700	63,600	73,800	79,400
December	51,000	60,400	63,300	62,100
Year	58,600	67,300	65,000	74,400

MONTHLY PRODUCTION OF ELECTRICITY IN THOUSANDS OF KILOWATT-HOURS
BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1922

Month	Total	Water Power	Fuel Power
January	3,806,650	1,287,341	2,519,309
February	3,469,749	1,222,825	2,246,924
March	3,823,404	1,470,424	2,352,980
April	3,598,469	1,490,254	2,108,215
May	3,325,367	1,548,450	2,176,917
June	3,337,115	1,489,628	2,047,487
July	3,871,324	1,556,956	2,314,368
August	4,074,908	1,494,766	2,580,143
September	4,049,204	1,358,292	2,690,913
October	4,352,405	1,372,495	2,979,910
November	4,409,680	1,366,988	3,042,892
December	4,574,574	1,390,384	3,184,190
Total	47,676,049	17,238,703	30,437,246

MONTHLY CONSUMPTION OF FUEL IN THE PRODUCTION OF ELECTRICITY
BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1922

Month	Coal (Net tons)	Oil (barrels)	Gas (M cubic feet
January	2,953,540	1,108,413	1,633,907
February	2,593,259	995,836	1,599,967
March	2,725,561	949,952	1,599,132
April	2,456,592	824,097	1,850,180
May	2,471,123	856,173	2,212,847
June	2,486,099	919,960	2,344,788
July	2,563,520	1,010,117	2,606,763
August	2,816,878	1,311,945	3,036,137
September	2,893,986	1,361,387	3,125,059
October	3,275,204	1,308,638	2,833,831
November	3,350,761	1,239,904	2,383,084
December	3,566,346	1,311,676	1,926,135
Total	34,175,929	13,198,286	27,171,850

ANNUAL PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1922

Year	Total		Water Power			Fuel Power		
	Kilowatt-hours	Change from previous year (per cent)	Kilowatt-hours	Per cent of total	Change from previous year (per cent)	Kilowatt-hours	Per cent of total	Change from previous year (per cent)
1919	38,921,000,000	---------	14,606,000,000	37.5	-------	24,315,000,000	62.5	-----
1920	43,555,000,000	+11.9	16,150,000,000	37.1	+10.6	27,405,000,000	62.9	+12.7
1921	40,976,000,000	- 5.9	14,971,000,000	36.5	- 7.3	26,005,000,000	63.5	- 5.1
1922 a	47,676,000,000	+16.4	17,239,000,000	36.2	+15.1	30,437,000,000	63.8	+17.0

ANNUAL CONSUMPTION OF FUEL IN THE PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1922

Year	Coal		Fuel oil		Gas	
	Short tons	Change from previous year (per cent)	Barrels	Change from previous year (per cent)	M cubic feet	Change from previous year (per cent)
1919	35,100,000	-----	11,050,000	-----	21,406,000	-----
1920	37,124,000	+ 5.8	13,123,000	+18.8	24,702,000	+15.4
1921	31,585,000	-14.9	12,045,000	- 8.2	23,722,000	- 4.0
1922 a	34,176,000	+ 8.2	13,198,000	+ 9.6	27,172,000	+14.5

a Preliminary figures.

The average daily production of electricity by public-utility power plants in December broke all records of average daily output for the sixth time since May. The increase, however, over the revised figures for November was small as the seasonal decrease in the demand for electricity which generally occurs near the end of each year apparently started in December. The average daily output for December was 146,700,000 kilowatt-hours and the revised figures for November are 146,000,000 kilowatt-hours.

The average daily output of electricity and the proportion produced by water power for each month of this year were as follows: January, 122,900,000 kilowatt-hours, 34.0 per cent; February, 123,900,000 kilowatt-hours, 35.3 per cent; March 123,300,000 kilowatt-hours, 38.5 per cent; April, 120,000,000 kilowatt-hours, 41.4 per cent; May,123,400,000 kilowatt-hours, 43.1 per cent; June, 127,900,000 kilowatt-hours, 41.5 per cent; July, 134,900,000 kilowatt-hours, 40.2 per cent; August, 131,400,000 kilowatt-hours, 36.7 per cent; September, 135,000,000 kilowatt-hours, 33.5 per cent; October, 139,800,000 kilowatt-hours, 31.2 per cent; November, 147,000,000 kilowatt-hours, 31.0 per cent; and December, 147,600,000 kilowatt-hours, 30.4 per cent. The average daily production for 1923 was 130,600,000 kilowatt-hours, of which 36.2 per cent was produced by water power.

The tables on page 7 show the monthly production of electricity and the monthly consumption of fuels by public-utility power plants. The table on page 8 gives the annual output and fuel consumption for each year from 1919 to 1922 and shows the comparison with the figures for the previous year. The total output of electricity by public-utility power plants in 1922 was the largest ever produced, being 16.4 per cent greater than the 1921 output and nearly 10 per cent greater than the 1920 output, which is next to 1922 in size. The economies in the utilization of fuel and in plant operation were continued during the year, as the increase in fuel consumption was only about 8.5 per cent greater than that for 1921 while the production of electricity by the use of fuel was 17 per cent greater than in 1921.

The curves on page 10 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date. The curve showing the production of electricity by the use of water power in 1922 shows a decrease for December as compared with November, indicating a decrease in the amount of water available for the use of hydroelectric plants in December.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

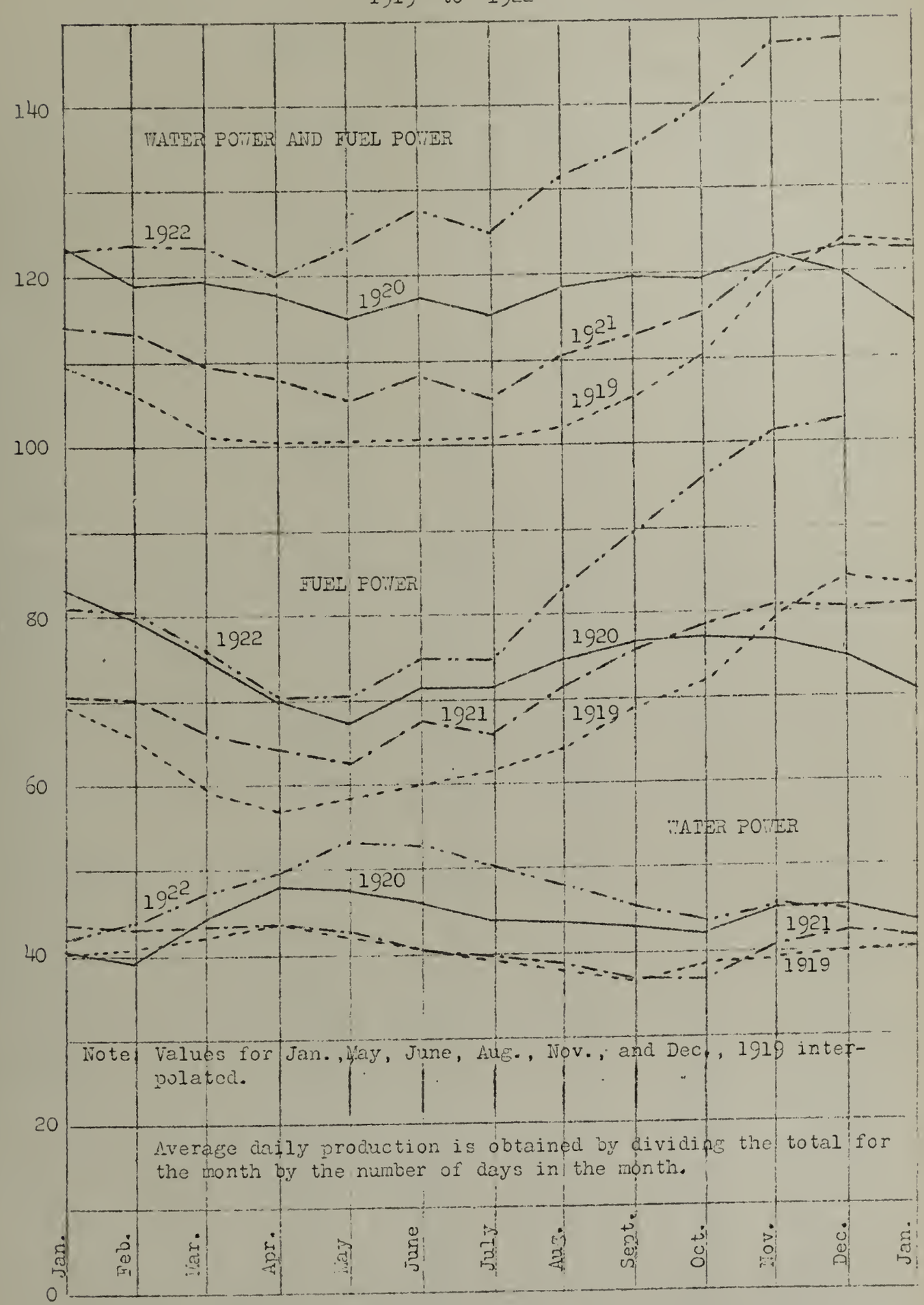
Prepared under the direction of A. H. Horton.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1919 to 1922



Note: Values for Jan., May, June, Aug., Nov., and Dec., 1919 interpolated.

Average daily production is obtained by dividing the total for the month by the number of days in the month.

DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Office of the Director — March 5, 1923.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES FOR SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1922, AND JANUARY, 1923

Compiled by
Division of Power Resources, United States Geological Survey

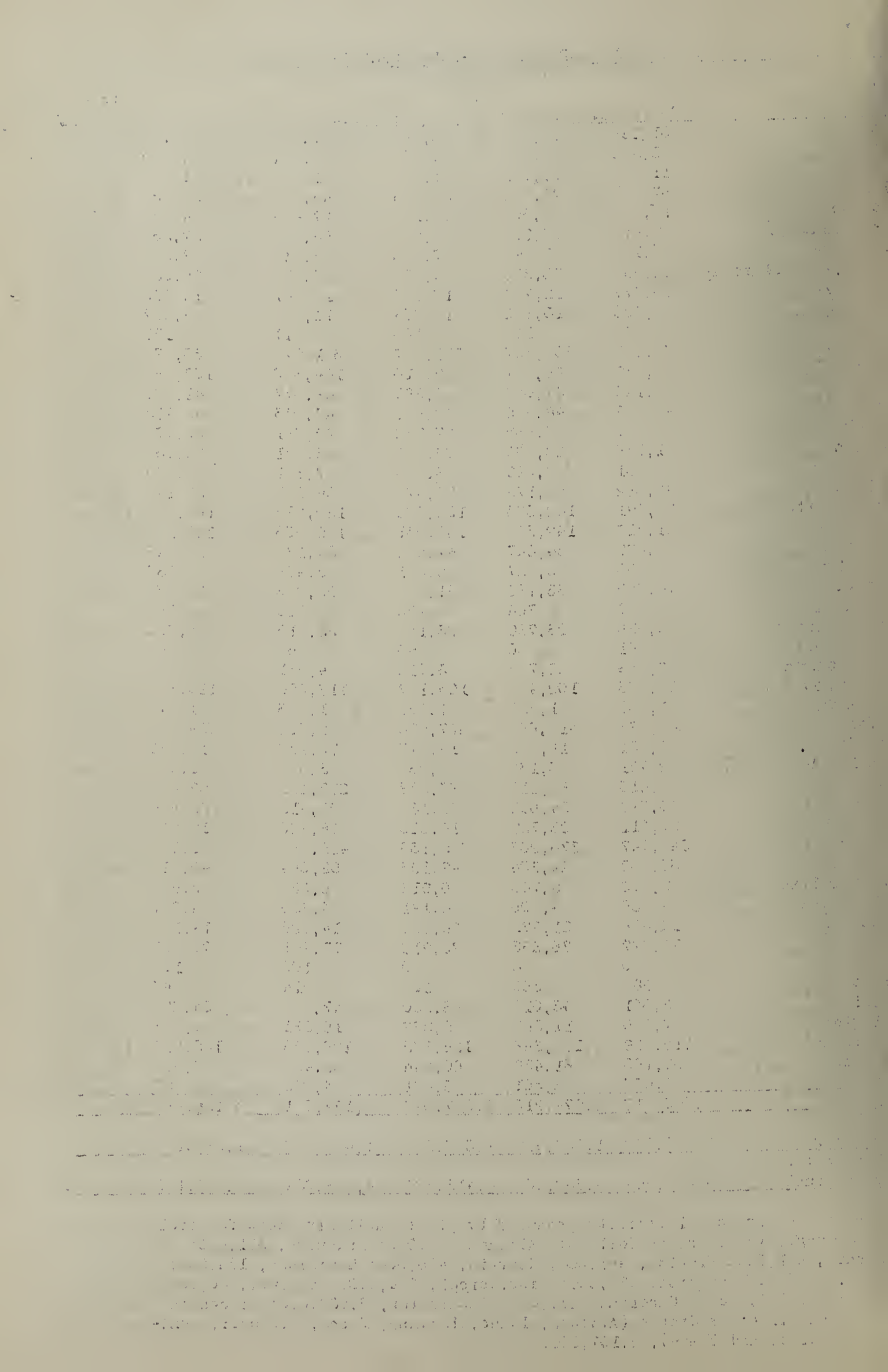
THOUSANDS OF KILOWATT-HOURS PRODUCED BY WATER POWER

State	1922				1923
	September	October	November	December	January
Alabama	12,592	13,143	11,559	25,145	39,047
Arizona	11,186	9,029	6,112	4,983	7,076
Arkansas	141	138	123	138	122
California	299,226	302,759	300,086	319,343	313,575
Colorado	14,517	13,248	12,319	13,313	13,821
Connecticut	11,495	9,182	7,365	5,946	19,006
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	964	933	900	738	783
Georgia	43,683	45,235	35,408	36,015	43,815
Idaho	53,335	44,123	45,540	53,032	53,166
Illinois	17,454	17,021	16,856	16,132	16,331
Indiana	2,201	2,578	2,803	3,077	5,278
Iowa	44,816	45,372	49,385	41,919	44,817
Kansas	693	613	1,368	919	1,414
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	33,444	36,135	35,367	34,919	37,919
Maryland	110	118	98	151	219
Massachusetts	25,050	22,526	23,134	13,840	37,072
Michigan	54,381	57,942	60,674	57,839	56,889
Minnesota	23,574	21,188	27,613	19,173	17,742
Mississippi	0	0	0	0	0
Missouri	96	97	646	3,114	4,983
Montana	80,863	88,260	90,830	100,239	94,968
Nebraska	1,291	1,296	1,448	932	1,119
Nevada	3,215	3,438	3,353	3,344	3,951
New Hampshire	9,809	10,292	10,358	7,532	14,837
New Jersey	170	120	93	116	196
New Mexico	45	45	40	58	57
New York	252,203	256,971	263,056	267,254	292,556
North Carolina	34,660	29,600	29,977	21,033	19,930
North Dakota	0	0	0	0	0
Ohio	1,619	1,356	930	2,004	4,002
Oklahoma	68	38	121	113	121
Oregon	23,690	25,501	29,551	31,455	37,269
Pennsylvania	31,079	21,015	17,527	22,279	50,851
Rhode Island	582	335	346	318	790
South Carolina	63,375	74,783	69,632	94,173	95,746
South Dakota	794	794	833	614	594
Tennessee	27,706	24,004	18,370	36,198	40,492
Texas	208	209	208	187	195
Utah	17,963	18,964	20,668	19,333	19,459
Vermont	13,544	13,384	11,527	10,051	14,140
Virginia	9,203	10,893	11,138	17,373	20,242
Washington	98,181	96,298	108,010	103,741	122,077
West Virginia	895	694	388	1,704	2,680
Wisconsin	38,014	32,682	40,631	34,426	30,680
Wyoming	149	135	155	152	147
Total	1,358,292	1,352,495	1,366,554	1,424,373	1,580,182

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1922				1923
	September	October	November	December	January
Alabama	51,183	53,715	62,582	41,093	24,104
Arizona	3,450	3,938	4,002	4,051	4,455
Arkansas	11,894	11,151	11,272	11,607	11,459
California	87,237	79,880	59,564	48,602	57,239
Colorado	19,269	22,609	24,179	27,432	24,032
Connecticut	49,610	57,907	63,005	68,874	57,567
Delaware	7,188	7,596	7,990	8,116	7,839
District of Columbia	22,968	23,839	24,287	26,872	26,689
Florida	10,977	12,769	13,360	14,741	14,733
Georgia	9,960	10,633	13,068	11,239	8,487
Idaho	30	168	160	211	171
Illinois	276,643	303,337	319,977	331,974	333,970
Indiana	89,939	96,688	99,810	104,380	107,489
Iowa	36,145	39,049	38,889	41,477	41,621
Kansas	46,019	48,905	47,621	47,033	45,795
Kentucky	25,581	26,885	27,762	29,781	30,576
Louisiana	21,136	22,229	22,011	23,471	24,036
Maine	451	2,099	3,615	7,341	5,593
Maryland	42,012	55,172	57,477	58,307	37,143
Massachusetts	119,691	142,323	152,928	182,279	163,649
Michigan	131,512	142,389	140,231	149,206	163,145
Minnesota	43,879	54,047	47,539	54,172	56,847
Mississippi	5,383	5,557	5,391	5,428	5,387
Missouri	74,289	83,183	81,639	93,246	92,074
Montana	707	764	798	810	782
Nebraska	23,386	23,780	23,185	25,219	24,700
Nevada	61	60	63	63	69
New Hampshire	2,513	2,766	3,016	4,661	3,352
New Jersey	93,673	102,474	105,187	113,850	115,195
New Mexico	1,400	1,359	1,361	1,483	1,473
New York	365,473	416,683	427,570	468,312	458,446
North Carolina	13,931	16,432	19,473	13,192	12,981
North Dakota	2,791	3,130	3,286	3,523	3,446
Ohio	258,413	282,118	287,558	295,155	309,420
Oklahoma	23,082	24,601	25,138	25,812	25,844
Oregon	21,611	23,759	19,010	18,320	10,210
Pennsylvania	347,747	376,263	395,138	418,585	422,129
Rhode Island	36,752	44,304	47,196	52,064	46,813
South Carolina	5,403	5,745	6,912	6,333	5,908
South Dakota	4,036	4,206	4,191	4,726	4,781
Tennessee	13,856	21,972	29,386	14,626	14,162
Texas	73,777	76,883	75,912	77,968	77,961
Utah	0	0	0	100	100
Vermont	282	350	102	514	47
Virginia	42,361	43,015	48,250	47,940	34,829
Washington	7,555	11,592	5,832	16,581	4,753
West Virginia	112,429	126,646	126,175	126,078	135,094
Wisconsin	50,160	61,439	60,244	63,488	68,653
Wyoming	3,067	3,501	3,631	4,025	3,750
Total	2,690,912	2,979,910	3,047,073	3,194,361	3,128,998
Total by water power	1,358,292	1,352,495	1,366,554	1,424,373	1,580,182
Total by water power and fuels	4,049,204	4,332,405	4,413,627	4,618,734	4,709,180

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during January, 1923, are as follows: Alabama, 49,000; Arkansas, 331,000; California, 671,000; Florida, 461,000; Georgia, 486,000; Louisiana, 154,000; Michigan, 87,000; Minnesota, 570,000; Mississippi, 994,000; Missouri, 80,000; Oregon, 8,328,000; South Carolina, 232,000; Washington, 3,009,000; Wisconsin, 256,000; and all other States (Arizona, Idaho, Indiana, Maine, Missouri, Montana, New Mexico, and Texas), 2,107,000.



Electric power produced during September, October, November, and December, 1922, and January, 1923, required the combustion of fuels in the quantities indicated in the following tables:

Coal - short tons

State	1922				1923
	September	October	November	December	January
Alabama	56,630	60,281	68,521	47,518	31,374
Arizona	5	60	35	0	0
Arkansas	5,385	7,844	8,621	9,375	9,556
California	0	0	0	0	0
Colorado	33,902	38,462	39,306	39,935	39,002
Connecticut	60,719	69,617	74,181	85,116	74,051
Delaware	8,428	8,988	8,334	9,512	9,031
District of Columbia	19,104	21,355	20,706	23,172	23,790
Florida	1,610	1,300	1,368	1,538	1,595
Georgia	11,923	12,898	16,753	13,919	8,685
Idaho	0	0	0	0	0
Illinois	374,107	411,907	418,934	462,340	463,327
Indiana	166,132	187,863	191,265	198,548	201,410
Iowa	69,030	82,881	84,757	96,588	93,964
Kansas	21,011	32,589	32,342	29,972	30,377
Kentucky	40,448	41,721	44,252	45,686	46,386
Louisiana	5,205	2,721	2,117	2,479	3,026
Maine	466	2,456	3,578	4,520	1,970
Maryland	40,348	50,467	51,285	53,662	39,454
Massachusetts	114,099	134,214	136,073	173,614	149,527
Michigan	138,083	152,406	150,129	159,551	165,449
Minnesota	51,684	64,630	59,618	72,403	74,531
Mississippi	8,922	8,751	8,079	8,401	8,138
Missouri	80,142	112,906	119,341	140,373	134,390
Montana	3,995	4,151	4,423	4,521	4,054
Nebraska	23,897	27,903	32,702	35,218	34,592
Nevada	0	0	0	0	0
New Hampshire	2,967	3,258	3,582	5,492	4,228
New Jersey	109,617	120,818	121,794	129,530	130,488
New Mexico	2,914	3,121	3,235	3,262	3,276
New York	386,950	436,029	440,039	474,791	464,110
North Carolina	23,912	24,701	26,953	20,605	20,960
North Dakota	12,460	14,126	19,279	22,096	21,600
Ohio	286,376	313,749	328,318	346,697	360,785
Oklahoma	4,471	6,455	7,277	7,063	6,630
Oregon	140	146	135	150	140
Pennsylvania	436,023	474,055	478,551	520,967	531,225
Rhode Island	7,789	9,437	8,986	10,402	12,569
South Carolina	10,039	10,571	11,926	11,507	11,100
South Dakota	7,101	8,163	8,114	9,389	9,620
Tennessee	28,949	35,019	46,471	26,277	26,112
Texas	19,105	18,637	17,516	21,777	21,011
Utah	0	0	0	275	285
Vermont	10	46	22	95	65
Virginia	45,289	46,792	49,558	46,733	38,647
Washington	3,213	8,484	3,836	7,292	5,301
West Virginia	112,046	120,749	123,562	122,792	136,734
Wisconsin	57,014	72,910	73,775	81,058	90,664
Wyoming	6,326	9,567	8,317	10,412	8,824
Total	2,898,986	3,275,204	3,357,966	3,596,623	3,552,053

State	Fuel oil - barrels				
	1922				1923
	September	October	November	December	January
Alabama	3,696	3,247	2,622	404	2,707
Arizona	15,269	16,924	18,340	18,884	20,012
Arkansas	15,604	15,703	20,916	20,344	20,624
California	302,272	280,385	254,718	246,195	274,129
Colorado	0	0	0	0	0
Connecticut	1,457	1,710	1,247	983	993
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	57,463	68,778	72,990	79,565	75,907
Georgia	22,098	23,528	22,374	22,878	22,217
Idaho	0	0	0	0	0
Illinois	2,590	1,144	921	934	875
Indiana	494	753	554	672	755
Iowa	12,521	3,851	2,423	3,330	3,204
Kansas	132,588	127,248	124,160	129,165	125,759
Kentucky	3,966	3,278	3,593	3,401	3,323
Louisiana	60,618	71,967	70,397	74,347	73,907
Maine	1,974	5,811	10,377	21,604	20,206
Maryland	0	0	0	0	0
Massachusetts	40,060	43,874	50,441	57,368	42,037
Michigan	262	276	617	904	827
Minnesota	3,987	2,139	1,911	1,742	1,899
Mississippi	11,762	11,860	12,342	12,567	12,545
Missouri	111,335	52,307	27,850	40,295	35,954
Montana	239	157	223	198	195
Nebraska	55,882	38,460	20,994	23,811	22,083
Nevada	227	289	210	331	331
New Hampshire	0	0	0	0	0
New Jersey	150	160	348	189	476
New Mexico	2,095	1,961	1,766	1,610	533
New York	14,903	25,413	25,766	16,755	26,165
North Carolina	203	219	249	200	219
North Dakota	293	325	331	280	259
Ohio	2,659	750	369	362	351
Oklahoma	60,506	48,533	50,695	49,867	51,226
Oregon	4,919	8,120	8,189	19,288	8,502
Pennsylvania	349	432	451	533	451
Rhode Island	106,930	129,073	137,423	150,854	129,362
South Carolina	60	50	50	50	0
South Dakota	2,771	2,797	2,637	2,833	2,325
Tennessee	0	0	95	95	119
Texas	279,168	282,478	274,659	279,663	266,929
Utah	0	0	0	0	0
Vermont	2,430	2,863	1,022	3,999	1,085
Virginia	0	95	89	74	0
Washington	22,040	25,534	9,785	12,546	7,845
West Virginia	0	0	0	0	0
Wisconsin	250	253	257	260	277
Wyoming	5,277	6,091	5,292	8,045	7,460
Total	1,361,387	1,308,836	1,239,693	1,307,425	1,264,073

State	Natural gas - thousands of cubic feet				
	1922				1923
	September	October	November	December	January
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	280,934	191,129	178,037	158,599	154,673
California	643,228	610,904	318,048	159,178	193,776
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,513	1,232	2,095	1,926	1,332
Iowa	0	0	0	0	0
Kansas	348,823	164,951	155,797	156,982	166,560
Kentucky	15,917	22,711	24,330	22,573	25,681
Louisiana	91,995	92,339	98,290	99,303	100,688
Maine	0	0	0	0	0
Maryland	590	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,216	1,255	1,223	1,292	1,254
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	15,460	24,774	16,185	15,620	16,387
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	701,207	698,745	593,171	407,820	446,446
Oklahoma	443,105	464,123	448,351	439,437	478,505
Oregon	0	0	0	0	0
Pennsylvania	55,894	55,014	67,844	59,578	49,519
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	281,199	270,337	260,084	227,183	282,987
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	238,041	225,676	208,029	163,943	152,316
Wisconsin	0	0	0	0	0
Wyoming	4,937	10,641	11,796	10,898	10,877
Total	3,125,059	2,833,831	2,383,280	1,924,332	2,081,001

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919-1923

Coal
(Net tons)

Month	1919	1920	1921	1922	1923
January	104,000	115,600	95,900	95,300	114,600
February	102,000	111,500	93,900	92,600	
March	93,900	105,000	85,200	87,800	
April	88,100	97,200	80,600	81,900	
May	85,300	91,100	77,900	79,700	
June	88,300	95,000	81,360	82,900	
July	85,700	94,800	79,400	82,700	
August	86,700	97,100	83,200	90,900	
September	92,200	100,100	86,300	96,600	
October	98,400	101,800	89,000	105,700	
November	112,500	105,200	92,600	111,900	
December	116,800	103,200	93,700	116,000	
Year	96,200	101,400	86,500	93,600	

Oil
(barrels)

Month	1919	1920	1921	1922	1923
January	21,900	41,600	28,900	35,700	40,800
February	21,900	40,300	27,900	35,600	
March	20,400	34,200	27,400	30,600	
April	19,400	30,400	28,100	27,500	
May	23,300	29,800	27,500	27,600	
June	29,000	35,900	30,500	30,700	
July	32,1000	38,400	33,200	32,600	
August	34,600	38,700	37,600	42,300	
September	37,100	40,700	39,700	45,400	
October	39,000	37,700	38,100	42,200	
November	41,700	32,000	38,200	41,300	
December	40,800	30,600	38,400	42,200	
Year	30,300	35,900	33,000	36,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923
January	35,500	46,100	55,300	52,700	67,100
February	47,100	45,300	52,000	57,100	
March	57,000	50,800	50,100	51,600	
April	62,000	60,100	62,000	61,700	
May	62,100	68,400	64,300	71,400	
June	66,200	75,200	69,000	78,200	
July	66,400	83,700	62,400	84,100	
August	64,500	87,400	74,700	98,600	
September	63,400	90,500	78,900	104,200	
October	64,400	77,600	73,600	91,400	
November	60,700	63,600	73,800	79,400	
December	51,000	60,400	63,300	62,100	
Year	58,600	67,500	65,000	74,400	

The production of electricity by public-utility power plants during the first month in 1923 was at the unprecedented rate of 151,900,000 kilowatt-hours per day, - an increase of nearly 24 per cent over January, 1922, and an increase of nearly 2 per cent over the previous record rate established in December. Starting with August, each month has established a new record for the daily production of electricity. An examination of the curve of average total daily output for 1922 on page 8 indicates that the output of electricity by public-utility plants in 1923 will be larger than ever before. The curve also indicates that the usual seasonal decrease in the demand for electricity which generally occurs about this time each year was small as there was but a small decrease in the rate of increase, shown by the slight flattening of the curve since November. It will be interesting to watch the curve of average total daily output during the coming year to see if the demand for electricity will keep on increasing throughout the year unaffected by the usual seasonal variations. There was a marked and abnormal increase in the production of electricity by the use of water power during January, which can only be explained by an increase in the amount of water available for the use of water power plants. Nearly all of the important water power States showed increases in water power output except California, Montana, and Wisconsin, which showed a decrease. In December about 31 per cent of the total output was produced by water power while in January 33½ per cent was produced by water power.

The curves on page 8 show the variation in average daily output of electricity produced by water power, by fuel power, and by both water power and fuel power for each month and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

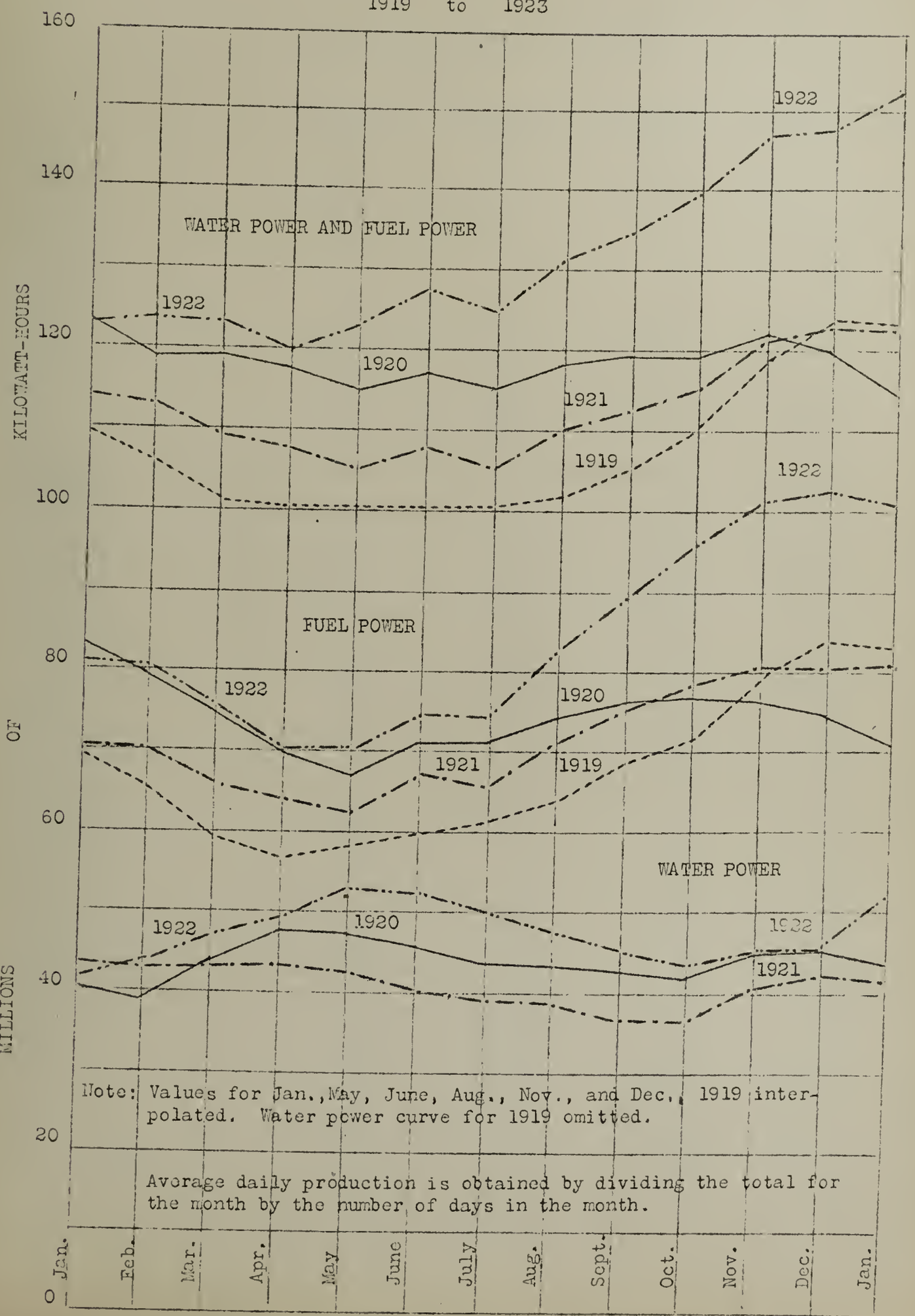
Prepared under the direction of A. H. Horton.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1919 to 1923



Note: Values for Jan., May, June, Aug., Nov., and Dec., 1919 interpolated. Water power curve for 1919 omitted.

Average daily production is obtained by dividing the total for the month by the number of days in the month.

THOUSANDS OF KILOWATT-HOURS PRODUCED
BY FUELS

State	1922			1923	
	October	November	December	January	February
Alabama	53,715	62,582	41,093	24,035	15,086
Arizona	3,938	4,002	4,080	4,686	4,429
Arkansas	11,151	11,272	11,620	11,593	11,059
California	79,880	59,664	48,602	53,435	47,325
Colorado	22,609	24,179	27,432	24,032	23,633
Connecticut	57,907	63,005	68,874	57,567	56,888
Delaware	7,596	7,990	8,116	7,839	7,113
District of Columbia	23,839	24,287	26,872	26,689	23,863
Florida	12,769	13,360	14,741	15,252	14,631
Georgia	10,633	13,068	11,239	8,476	7,471
Idaho	168	160	211	170	144
Illinois	303,337	319,977	332,009	333,288	308,849
Indiana	96,688	99,810	104,445	107,821	101,149
Iowa	39,049	38,889	41,477	41,617	36,618
Kansas	48,905	47,621	47,033	45,702	40,596
Kentucky	26,885	27,762	29,781	29,581	26,994
Louisiana	22,229	22,011	23,471	24,034	21,407
Maine	2,099	3,615	7,341	3,417	4,819
Maryland	55,172	57,477	58,307	37,249	29,970
Massachusetts	142,323	152,928	182,279	163,580	153,391
Michigan	142,389	140,231	149,206	163,323	150,591
Minnesota	54,047	47,539	54,172	56,846	53,831
Mississippi	5,557	5,391	5,428	5,434	5,154
Missouri	83,183	81,639	93,250	92,106	84,344
Montana	764	798	810	792	764
Nebraska	23,780	23,185	25,219	24,597	21,581
Nevada	60	63	63	67	64
New Hampshire	2,766	3,016	4,661	3,352	3,508
New Jersey	102,474	105,187	113,850	115,187	104,461
New Mexico	1,359	1,361	1,483	1,468	1,258
New York	416,683	427,570	468,312	458,374	418,655
North Carolina	16,432	19,473	13,192	11,783	6,532
North Dakota	3,130	3,286	3,523	3,461	2,925
Ohio	282,118	287,558	295,145	309,180	284,907
Oklahoma	24,601	25,138	25,812	25,709	21,898
Oregon	23,759	19,010	18,320	10,272	10,870
Pennsylvania	376,263	395,138	418,738	437,016	391,405
RHode Island	44,304	47,196	52,064	46,813	45,404
South Carolina	5,745	6,912	6,161	5,462	5,168
South Dakota	4,206	4,191	4,960	4,987	4,264
Tennessee	21,972	29,386	14,626	14,146	13,237
Texas	76,883	75,912	77,968	77,984	71,907
Utah	0	0	100	0	0
Vermont	350	102	514	47	646
Virginia	43,015	48,250	47,814	34,439	28,019
Washington	11,592	5,832	16,581	4,391	6,612
West Virginia	126,646	126,175	126,078	134,895	121,419
Wisconsin	61,439	60,244	63,488	68,678	64,419
Wyoming	3,501	3,631	4,025	3,747	3,355
Total	2,979,910	3,047,073	3,194,586	3,134,619	2,862,633
Total by water power	1,352,495	1,366,554	1,416,860	1,614,644	1,487,071
Total by water power and fuels	4,332,405	4,413,627	4,611,446	4,749,263	4,349,704

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during February, 1923, are as follows: Alabama, 48,000; Arkansas, 153,000; California, 525,000; Florida, 391,000; Georgia, 453,000; Louisiana, 147,000; Michigan, 153,000; Minnesota, 487,000; Mississippi, 942,000; Oregon, 9,578,000; South Carolina, 207,000; Washington, 1,402,000; Wisconsin, 242,000; and all other States (Arizona, Idaho, Indiana, Maine, Missouri, Montana, New Mexico, and Texas), 1,975,000.

Electric power produced during October, November, and December, 1922, and January and February, 1923, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons				
	1922			1923	
	October	November	December	January	February
Alabama	60,281	68,521	47,518	31,083	20,965
Arizona	60	35	0	0	0
Arkansas	7,844	8,621	9,375	10,491	10,294
California	0	0	0	0	0
Colorado	38,462	39,306	39,935	39,002	36,409
Connecticut	69,617	74,181	85,116	74,051	70,093
Delaware	8,988	8,334	9,512	9,031	7,856
District of Columbia	21,355	20,706	23,172	23,790	20,689
Florida	1,300	1,368	1,538	1,595	1,280
Georgia	12,898	16,753	13,919	8,599	7,249
Idaho	0	0	0	0	0
Illinois	411,907	418,934	462,162	460,884	424,145
Indiana	187,863	191,265	198,974	201,651	187,094
Iowa	82,881	84,757	96,588	93,957	86,101
Kansas	32,589	32,342	29,972	30,249	22,546
Kentucky	41,721	44,252	45,686	44,362	40,832
Louisiana	2,721	2,117	2,479	3,020	2,720
Maine	2,456	3,578	4,520	731	552
Maryland	50,467	51,285	53,662	39,890	32,703
Massachusetts	134,214	136,073	173,614	156,634	142,478
Michigan	152,406	150,129	159,551	165,704	157,230
Minnesota	64,630	59,618	72,411	74,612	72,866
Mississippi	8,751	8,079	8,401	8,248	7,830
Missouri	112,906	119,341	140,456	134,133	124,588
Montana	4,151	4,423	4,521	4,034	3,830
Nebraska	27,903	32,702	35,218	34,592	30,107
Nevada	0	0	0	0	0
New Hampshire	3,258	3,582	5,492	4,228	3,981
New Jersey	120,818	121,794	129,530	130,476	117,639
New Mexico	3,121	3,235	3,262	3,276	2,550
New York	436,029	440,039	474,791	464,244	436,241
North Carolina	24,701	26,953	20,605	20,080	14,231
North Dakota	14,126	19,279	22,096	21,585	19,675
Ohio	313,749	328,318	346,677	360,605	337,024
Oklahoma	6,456	7,277	7,063	6,357	5,920
Oregon	146	135	150	140	119
Pennsylvania	474,055	478,551	521,409	541,234	481,092
Rhode Island	9,437	8,986	10,402	12,569	10,966
South Carolina	10,571	11,926	11,132	10,463	9,858
South Dakota	8,163	8,114	10,089	9,923	8,488
Tennessee	35,019	46,471	26,277	26,056	23,195
Texas	18,637	17,516	21,777	21,101	19,008
Utah	0	0	275	10	0
Vermont	46	22	95	65	393
Virginia	46,792	49,558	46,499	38,079	33,632
Washington	8,484	3,836	7,292	4,950	4,549
West Virginia	120,749	123,562	122,792	136,849	120,836
Wisconsin	72,910	73,775	81,173	90,779	84,373
Wyoming	9,567	8,317	10,412	8,824	6,870
Total	3,275,204	3,357,966	3,597,590	3,561,236	3,251,097

State	Fuel oil - barrels				
	1922			1923	
	October	November	December	January	February
Alabama	3,247	2,622	404	2,707	2,707
Arizona	16,924	18,340	18,619	20,373	19,194
Arkansas	15,703	20,916	20,144	21,241	21,364
California	280,385	254,718	246,195	252,349	223,853
Colorado	0	0	0	0	0
Connecticut	1,710	1,247	983	993	1,402
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	68,778	72,990	79,565	80,557	75,799
Georgia	23,528	22,374	22,878	22,217	20,959
Idaho	0	0	0	0	0
Illinois	1,144	921	934	875	877
Indiana	753	554	672	755	690
Iowa	3,851	2,423	3,330	3,212	1,886
Kansas	127,248	124,160	129,165	123,597	117,010
Kentucky	3,278	3,593	3,401	3,323	1,850
Louisiana	71,967	70,397	74,347	73,895	65,733
Maine	5,811	10,377	21,604	15,081	16,478
Maryland	0	0	0	0	0
Massachusetts	43,874	50,441	57,368	58,317	52,483
Michigan	276	617	904	949	416
Minnesota	2,139	1,911	1,742	1,244	1,000
Mississippi	11,860	12,342	12,567	12,545	12,511
Missouri	52,307	27,850	40,295	36,080	37,961
Montana	157	223	198	195	123
Nebraska	38,460	20,994	23,811	21,903	20,439
Nevada	289	210	331	387	223
New Hampshire	0	0	0	0	0
New Jersey	160	348	189	476	447
New Mexico	1,961	1,766	1,610	505	430
New York	25,413	25,766	16,755	26,165	19,118
North Carolina	219	249	200	367	391
North Dakota	325	331	280	259	226
Ohio	750	369	362	351	304
Oklahoma	48,533	50,695	49,867	51,368	46,404
Oregon	8,120	8,189	19,288	8,598	7,520
Pennsylvania	432	451	533	451	373
Rhode Island	129,073	137,423	150,854	129,362	127,072
South Carolina	50	50	50	0	0
South Dakota	2,797	2,637	2,833	2,729	2,569
Tennessee	0	95	95	119	104
Texas	282,478	274,659	279,663	266,376	231,974
Utah	0	0	0	0	0
Vermont	2,863	1,022	3,999	1,085	4,322
Virginia	95	89	74	0	0
Washington	25,534	9,785	12,546	7,845	22,699
West Virginia	0	0	0	0	0
Wisconsin	253	257	260	277	258
Wyoming	6,091	5,292	8,045	7,476	7,034
Total	1,308,836	1,239,693	1,306,930	1,256,604	1,166,203

State	Natural gas - thousands of cubic feet				
	1922			1923	
	October	November	December	January	February
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	191,129	178,037	162,663	164,539	148,326
California	610,904	318,048	159,178	193,776	176,861
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	1,232	2,095	1,926	1,332	1,606
Iowa	0	0	0	0	0
Kansas	164,951	155,797	156,982	166,560	175,088
Kentucky	22,711	24,330	22,573	25,681	20,954
Louisiana	92,339	98,290	99,303	100,660	91,553
Maine	0	0	0	0	0
Maryland	0	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,255	1,223	1,292	1,254	1,062
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	24,774	16,185	15,620	16,387	15,280
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	698,745	593,171	407,820	446,502	287,349
Oklahoma	464,123	448,351	439,437	478,392	445,955
Oregon	0	0	0	0	0
Pennsylvania	55,014	67,844	59,578	54,801	50,436
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	270,337	260,084	227,183	282,987	302,093
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	225,676	208,029	163,943	152,748	122,977
Wisconsin	0	0	0	0	0
Wyoming	10,641	11,796	10,898	10,877	10,032
Total	2,833,831	2,383,280	1,928,396	2,096,496	1,849,572

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919-1923

Coal
(Net tons)

Month	1919	1920	1921	1922	1923
January	104,000	115,600	95,000	95,300	114,900
February	102,000	111,500	93,900	92,600	116,100
March	93,900	105,000	85,200	87,800	
April	88,100	97,200	80,600	81,900	
May	85,300	91,100	77,900	79,700	
June	88,300	95,000	81,360	82,900	
July	85,700	94,800	79,400	82,700	
August	86,700	97,100	83,200	90,900	
September	92,200	100,100	86,300	96,600	
October	98,400	101,800	89,000	105,700	
November	112,500	105,200	92,600	111,900	
December	116,800	103,200	93,700	116,000	
Year	96,200	101,400	86,500	93,600	

Oil
(barrels)

Month	1919	1920	1921	1922	1923
January	21,900	41,600	28,900	35,700	40,500
February	21,900	40,300	27,900	35,600	41,600
March	20,400	34,200	27,400	30,600	
April	19,400	30,400	28,100	27,500	
May	23,300	29,800	27,500	27,600	
June	29,000	35,900	30,500	30,700	
July	32,100	38,400	33,200	32,600	
August	34,600	38,700	37,600	42,300	
September	37,100	40,700	39,700	45,400	
October	39,000	37,700	38,100	42,200	
November	41,700	32,000	38,200	41,300	
December	40,800	30,600	38,400	42,200	
Year	30,300	35,900	33,000	36,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923
January	35,500	46,100	55,300	52,700	67,600
February	47,100	45,300	52,000	57,100	66,100
March	57,000	50,800	50,1000	51,600	
April	62,000	60,100	62,000	61,700	
May	62,100	68,400	64,300	71,400	
June	66,200	75,200	69,000	78,200	
July	66,400	83,700	62,400	84,100	
August	64,500	87,400	74,700	98,600	
September	63,400	90,500	78,900	104,200	
October	64,400	77,600	73,600	91,400	
November	60,700	63,600	73,800	79,400	
December	51,000	60,400	63,300	62,200	
Year	58,600	67,500	65,000	74,400	

MONTHLY PRODUCTION OF ELECTRICITY IN THOUSANDS OF KILOWATT-HOURS
BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1922

Month	Total	Water Power	Fuel Power
January	3,809,650	1,297,341	2,512,309
February	3,469,749	1,222,825	2,246,924
March	3,823,404	1,470,424	2,352,980
April	3,598,469	1,490,254	2,108,215
May	3,825,367	1,648,450	2,176,917
June	3,837,115	1,589,628	2,247,487
July	3,871,324	1,556,956	2,314,368
August	4,074,908	1,494,766	2,580,142
September	4,049,204	1,358,292	2,690,912
October	4,332,405	1,352,495	2,979,910
November	4,413,627	1,366,554	3,047,073
December	4,611,446	1,416,860	3,194,586
Total	47,716,668	17,264,845	30,451,823

MONTHLY CONSUMPTION OF FUEL IN THE PRODUCTION OF ELECTRICITY
BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1922

Month	Coal (net tons)	Oil (barrels)	Gas (M cubic feet)
January	2,953,540	1,108,413	1,633,907
February	2,593,259	995,826	1,599,967
March	2,723,561	949,952	1,599,132
April	2,456,592	824,097	1,850,180
May	2,471,123	856,173	2,212,847
June	2,486,099	919,960	2,344,788
July	2,563,580	1,010,117	2,606,783
August	2,816,878	1,311,945	3,056,137
September	2,898,986	1,361,387	3,125,059
October	3,275,204	1,308,836	2,833,831
November	3,357,966	1,239,693	2,383,280
December	3,597,590	1,306,930	1,928,396
Total	34,194,378	13,193,329	27,174,307

ANNUAL PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1922

Year	Total		Water Power			Fuel Power		
	Kilowatt-hours	Change from previous year (per cent)	Kilowatt-hours	Per cent of total	Change from previous year (per cent)	Kilowatt-hours	Per cent of total	Change from previous year (per cent)
1919	38,921,000,000	-----	14,606,000,000	37.5	-----	24,315,000,000	62.5	-----
1920	43,555,000,000	+11.9	16,150,000,000	37.1	+10.6	27,405,000,000	62.9	+12.7
1921	40,976,000,000	- 5.9	14,971,000,000	36.5	- 7.3	26,005,000,000	63.5	- 5.1
1922	47,717,000,000	+16.5	17,265,000,000	36.2	+15.3	30,452,000,000	63.8	+17.1

ANNUAL CONSUMPTION OF FUEL IN THE PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1922

Year	Coal		Fuel oil		Gas	
	Short tons	Change from previous year (per cent)	Barrels	Change from previous year (per cent)	M cubic feet	Change from previous year (per cent)
1919	35,100,000	-----	11,050,000	-----	21,406,000	-----
1920	37,124,000	+ 5.8	13,123,000	+18.8	24,702,000	+15.4
1921	31,585,000	-14.9	12,045,000	- 8.2	23,722,000	- 4.0
1922	34,194,000	+ 8.3	13,193,000	+ 9.5	27,174,000	+14.5

AVERAGE CONSUMPTION OF COAL PER KILOWATT-HOUR BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1922

Year	Output by the use of fuel[a] (kilowatt-hours)	Consumption of coal and its equivalent[b] in other fuels		
		Net tons	Pounds per kilowatt-hour	Percentage of 1919 rate
1919	24,176,000,000	38,784,000	3.22	100.0
1920	27,248,000,000	41,424,000	3.04	94.4
1921	25,863,000,000	35,236,000	2.73	84.8
1922	30,215,000,000	37,996,000	2.52	78.3

a/ Coal, oil, and gas.
b/ 1 ton coal = 4 bbl. oil = 35,000 cu. ft. of gas (approximately).

The average daily production of electricity by public-utility power plants continues to break all records as the average production in February was about 1½ per cent greater than that for January. February is the seventh consecutive month which has established a new record of average daily output. The marked increase in the production of electricity during January and February of this year, as compared with the same period for 1922, is clearly shown by the curves of total output on page 10. All indications at the present time point to 1923 being a remarkable year in the production of electricity. The average daily output of electricity and the proportion produced by the use of water power for January and February were as follows: January, 153,200,000 kilowatt-hours, 34 per cent; February, 155,300,000 kilowatt-hours, 34.2 per cent. In January and February, 1922, the proportion produced by water power was 34 per cent and 35.2 per cent, respectively.

The tables on page 7 show the revised figures of monthly production of electricity and consumption of fuel by public-utility power plants for 1922; those on page 8 a comparison of the annual figures of output and fuel consumption for each of the four years for which records are available and the average consumption of coal and its equivalent in other fuels for each of the four years. The latter table is of especial interest as it shows that the consumption of fuel per kilowatt-hour has decreased about 22 per cent from 1919 to 1922. This is a remarkable achievement, the importance of which is readily recognized when it is considered that nearly 11,000,000 tons more of coal and its equivalent in other fuels would have been consumed in generating the electricity produced in 1922 by the use of fuel if the rate of consumption per kilowatt-hour had been the same as in 1919. A special endeavor should be made by public utilities to still further reduce the rate per kilowatt-hour in 1923.

The curves on page 10 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways, and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the United States Geological Survey relating to power production.

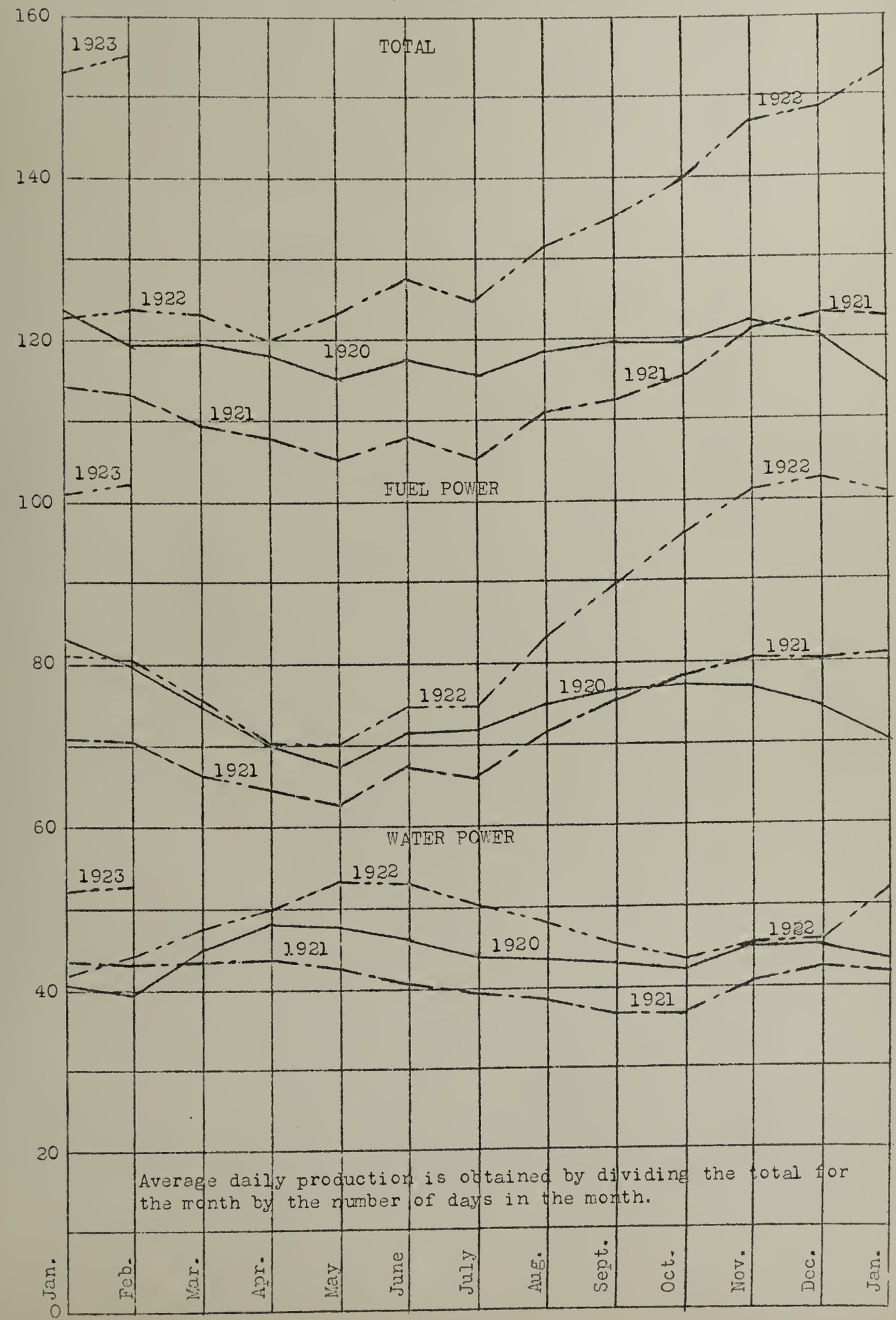
Prepared under the direction of A. H. Horton.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 to 1923



Average daily production is obtained by dividing the total for the month by the number of days in the month.

338.705
UN

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

May 3, 1923.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL
BY PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
FOR NOVEMBER AND DECEMBER, 1922, AND JANUARY, FEBRUARY, AND MARCH, 1923

Compiled by
Division of Power Resources, Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED
BY WATER POWER

State	1922		1923		
	November	December	January	February	March
Alabama	11,559	25,145	39,047	44,089	48,856
Arizona	6,112	4,983	7,076	5,030	7,885
Arkansas	123	138	122	105	112
California	300,086	319,343	318,771	291,715	339,768
Colorado	12,319	13,313	13,821	11,467	12,826
Connecticut	7,365	5,946	19,006	13,690	21,991
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	900	738	783	636	527
Georgia	35,408	36,015	45,429	46,596	50,807
Idaho	45,540	53,032	51,429	50,903	54,536
Illinois	16,856	16,132	16,393	13,708	15,227
Indiana	2,803	3,077	4,192	4,041	6,796
Iowa	49,385	41,919	44,810	38,741	63,843
Kansas	1,368	919	1,414	1,328	2,315
Kentucky	8	8	8	8	8
Louisiana	0	0	0	0	0
Maine	36,367	34,919	41,545	35,207	35,318
Maryland	98	151	219	207	302
Massachusetts	23,134	13,608	37,283	25,076	37,405
Michigan	60,674	57,876	56,959	49,511	66,622
Minnesota	27,613	19,173	17,846	15,048	19,863
Mississippi	0	0	0	0	0
Missouri	646	3,114	4,983	5,940	6,993
Montana	90,830	100,239	94,954	93,280	103,249
Nebraska	1,448	932	1,133	1,160	1,202
Nevada	3,353	3,344	3,829	3,466	3,721
New Hampshire	10,358	7,532	14,537	9,135	14,704
New Jersey	93	116	198	166	226
New Mexico	40	58	57	71	73
New York	263,056	267,299	302,848	261,857	287,038
North Carolina	29,977	21,033	32,903	30,232	31,291
North Dakota	0	0	0	0	0
Ohio	930	2,010	4,376	3,261	3,521
Oklahoma	121	113	121	120	166
Oregon	29,551	31,460	38,001	33,176	37,251
Pennsylvania	17,527	22,279	50,977	51,627	62,837
Rhode Island	346	518	790	545	808
South Carolina	69,632	86,172	98,978	99,706	98,597
South Dakota	833	614	594	477	595
Tennessee	18,370	36,198	40,499	36,095	44,115
Texas	208	187	195	179	187
Utah	20,668	19,333	20,575	15,788	16,717
Vermont	11,527	10,051	14,344	13,307	13,130
Virginia	11,138	18,000	21,295	24,104	25,905
Washington	108,010	103,741	124,311	108,248	118,714
West Virginia	388	1,704	2,681	2,679	3,183
Wisconsin	40,631	34,426	30,812	25,519	37,976
Wyoming	155	152	167	159	155
Total	1,366,554	1,416,860	1,620,311	1,467,343	1,697,361

THOUSANDS OF KILOWATT-HOURS PRODUCED BY FUELS

State	1922		1923		
	November	December	January	February	March
Alabama	62,582	41,093	24,025	14,901	13,612
Arizona	4,002	4,080	4,686	4,421	4,236
Arkansas	11,272	11,620	11,593	11,303	11,435
California	59,664	48,302	53,435	45,473	60,910
Colorado	24,179	27,432	24,032	23,636	24,444
Connecticut	63,005	68,874	57,567	56,893	54,296
Delaware	7,990	8,116	7,839	7,113	7,854
District of Columbia	24,287	26,872	26,689	23,863	24,927
Florida	13,360	14,741	15,252	14,660	15,748
Georgia	13,068	11,239	8,253	7,521	7,934
Idaho	160	211	170	144	166
Illinois	319,977	332,009	333,288	305,227	334,907
Indiana	99,810	104,445	107,861	99,732	98,893
Iowa	38,869	41,477	41,617	36,618	37,437
Kansas	47,621	47,033	45,702	40,532	40,048
Kentucky	27,762	29,781	29,581	26,958	28,170
Louisiana	22,011	23,471	24,034	21,407	23,423
Maine	3,615	7,341	3,417	4,819	4,691
Maryland	57,477	58,307	37,249	29,970	30,742
Massachusetts	152,928	182,279	163,580	153,391	156,533
Michigan	140,231	149,206	163,334	150,595	154,384
Minnesota	47,539	54,172	57,864	54,859	51,671
Mississippi	5,391	5,428	5,427	5,055	5,248
Missouri	81,639	93,250	92,167	84,378	78,715
Montana	798	810	792	736	770
Nebraska	23,185	25,219	24,679	21,961	23,320
Nevada	63	63	67	64	65
New Hampshire	3,016	4,661	3,352	3,508	2,527
New Jersey	105,187	113,850	115,315	104,347	113,451
New Mexico	1,361	1,483	1,468	1,268	1,347
New York	427,570	468,312	458,374	418,655	438,966
North Carolina	19,473	13,192	12,032	6,792	6,918
North Dakota	3,286	3,523	3,461	2,925	2,948
Ohio	287,558	295,145	309,180	284,908	298,526
Oklahoma	25,138	25,812	25,683	21,873	23,888
Oregon	19,010	18,320	10,272	10,486	9,169
Pennsylvania	395,138	418,738	434,254	391,336	424,939
Rhode Island	47,196	52,064	46,813	45,404	43,431
South Carolina	6,912	6,161	5,545	5,171	5,179
South Dakota	4,191	4,960	4,987	4,168	4,349
Tennessee	29,386	14,626	14,146	13,237	17,850
Texas	75,912	77,968	77,989	71,909	77,074
Utah	0	100	0	0	36
Vermont	102	514	47	646	299
Virginia	48,250	47,814	34,686	28,150	36,560
Washington	5,832	16,581	4,391	6,612	4,635
West Virginia	126,175	126,078	134,895	121,419	130,529
Wisconsin	60,244	63,488	68,678	64,419	63,524
Wyoming	3,631	4,025	3,747	3,355	3,524
Total	3,047,073	3,194,586	3,133,515	2,856,818	3,013,248
Total by water power	1,366,554	1,416,860	1,620,311	1,467,343	1,697,361
Total by water power and fuels	4,413,627	4,611,446	4,753,826	4,324,161	4,710,609

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during March, 1923, are as follows: Alabama, 58,000; Arkansas, 153,000; California, 571,000; Florida, 271,000; Georgia, 482,000; Louisiana, 153,000; Michigan, 137,000; Minnesota, 496,000; Mississippi, 959,000; Oregon, 8,345,000; South Carolina, 86,000; Washington, 1,516,000; Wisconsin, 615,000; and all other States (Arizona, Idaho, Indiana, Maine, Missouri, Montana, New Mexico and Texas), 2,220,000.

Electric power produced during November and December, 1922, and January, February, and March, 1923, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons 1922		1923		
	November	December	January	February	March
Alabama	68,521	47,618	31,148	20,663	20,204
Arizona	35	0	0	0	0
Arkansas	8,621	9,375	10,491	10,203	9,854
California	0	0	0	0	0
Colorado	39,306	39,935	39,002	36,419	41,106
Connecticut	74,181	85,116	74,051	70,093	66,891
Delaware	8,334	9,512	9,031	7,856	9,023
District of Columbia	20,706	23,172	23,790	20,689	21,360
Florida	1,368	1,538	1,595	1,280	1,394
Georgia	16,753	13,919	8,335	7,175	7,253
Idaho	0	0	0	0	0
Illinois	418,934	482,162	459,513	419,249	441,558
Indiana	191,265	198,974	201,832	185,268	183,225
Iowa	84,757	96,588	93,957	86,101	88,987
Kansas	32,342	29,972	30,249	22,460	22,296
Kentucky	44,252	45,586	44,362	40,842	44,788
Louisiana	2,117	2,479	3,020	2,720	3,341
Maine	3,578	4,520	731	552	1,308
Maryland	51,285	53,662	39,890	32,703	33,654
Massachusetts	136,073	173,614	155,634	142,478	143,951
Michigan	150,129	159,551	165,704	157,280	152,332
Minnesota	59,618	72,411	76,112	74,439	69,626
Mississippi	8,079	8,401	8,253	7,830	8,278
Missouri	119,341	140,456	134,303	124,412	111,370
Montana	4,423	4,521	4,034	4,548	4,435
Nebraska	32,702	35,218	34,997	31,326	32,716
Nevada	0	0	0	0	0
New Hampshire	3,582	5,492	4,228	3,981	3,382
New Jersey	121,794	129,530	130,679	117,801	124,815
New Mexico	3,235	3,262	3,276	2,598	2,437
New York	440,039	474,791	464,244	436,226	437,249
North Carolina	26,953	20,605	20,329	14,549	14,186
North Dakota	19,279	22,096	21,585	19,675	15,354
Ohio	328,318	346,677	360,605	337,443	357,192
Oklahoma	7,277	7,063	6,357	5,920	6,051
Oregon	135	150	140	119	120
Pennsylvania	478,551	521,409	535,984	483,199	514,959
Rhode Island	8,986	10,402	12,569	10,966	11,533
South Carolina	11,926	11,132	10,643	9,812	10,125
South Dakota	8,114	10,089	9,923	8,152	8,082
Tennessee	46,471	26,277	26,056	23,195	29,895
Texas	17,516	21,777	21,094	18,986	19,369
Utah	0	275	10	0	130
Vermont	22	95	65	393	97
Virginia	49,558	46,499	37,584	33,698	41,452
Washington	3,836	7,292	4,950	4,549	3,686
West Virginia	123,562	122,792	136,849	120,836	142,383
Wisconsin	73,775	81,173	90,779	84,373	81,415
Wyoming	8,317	10,412	8,824	6,870	7,116
Total	3,357,966	3,597,590	3,556,807	3,249,927	3,349,978

State	Fuel oil - barrels				
	1922		1923		
	November	December	January	February	March
Alabama	2,322	404	2,707	2,707	2,921
Arizona	18,340	18,619	20,373	19,077	19,379
Arkansas	20,916	20,144	21,241	24,185	17,755
California	254,718	246,195	252,349	214,798	225,816
Colorado	0	0	0	0	0
Connecticut	1,247	983	993	1,406	1,659
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	72,990	79,565	80,557	75,799	83,306
Georgia	22,374	22,878	22,217	21,035	23,116
Idaho	0	0	0	0	0
Illinois	921	934	875	877	837
Indiana	554	672	755	690	714
Iowa	2,423	3,330	3,212	1,886	1,582
Kansas	124,160	129,165	123,597	116,890	114,315
Kentucky	3,593	3,401	3,323	1,850	672
Louisiana	70,397	74,347	73,895	65,733	69,060
Maine	10,377	21,604	15,081	18,766	17,605
Maryland	0	0	0	0	0
Massachusetts	50,441	57,368	58,317	52,483	61,395
Michigan	617	904	598	599	382
Minnesota	1,911	1,742	1,244	1,046	1,001
Mississippi	12,342	12,567	12,545	11,853	12,686
Missouri	27,850	40,295	36,170	38,072	36,993
Montana	223	198	195	123	123
Nebraska	20,994	23,811	21,903	20,374	21,517
Nevada	210	331	387	223	225
New Hampshire	0	0	0	0	0
New Jersey	348	189	476	447	516
New Mexico	1,766	1,610	505	430	559
New York	25,766	16,755	26,165	19,118	20,376
North Carolina	249	200	367	391	367
North Dakota	331	280	259	226	230
Ohio	369	362	351	304	326
Oklahoma	50,695	49,867	50,998	46,034	52,069
Oregon	8,189	19,238	8,598	7,520	4,693
Pennsylvania	451	533	451	373	331
Rhode Island	137,423	150,854	129,362	127,072	121,615
South Carolina	50	50	0	0	0
South Dakota	2,637	2,833	2,729	2,569	2,603
Tennessee	95	95	119	104	112
Texas	274,659	279,663	266,376	231,986	252,701
Utah	0	0	0	0	0
Vermont	1,022	3,999	1,085	4,522	2,218
Virginia	89	74	0	0	0
Washington	9,785	12,546	7,845	22,699	12,039
West Virginia	0	0	0	0	0
Wisconsin	257	260	277	258	270
Wyoming	5,292	8,045	7,476	7,034	6,411
Total	1,239,693	1,306,930	1,255,973	1,161,359	1,190,495

Natural gas - thousands of cubic feet

	1922		1923		
	November	December	January	February	March
Alabama	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	178,037	162,663	164,539	144,756	161,664
California	318,048	159,178	193,776	176,861	471,515
Colorado	0	0	0	0	0
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	0	0	0	0	0
Florida	0	0	0	0	0
Georgia	0	0	0	0	0
Idaho	0	0	0	0	0
Illinois	0	0	0	0	0
Indiana	2,095	1,926	1,332	1,606	1,403
Iowa	0	0	0	0	0
Kansas	155,797	156,982	166,560	174,428	189,824
Kentucky	24,330	22,573	25,681	20,954	19,484
Louisiana	98,290	99,303	100,660	91,553	100,520
Maine	0	0	0	0	0
Maryland	0	0	0	0	0
Massachusetts	0	0	0	0	0
Michigan	0	0	0	0	0
Minnesota	0	0	0	0	0
Mississippi	0	0	0	0	0
Missouri	0	0	0	0	0
Montana	1,223	1,292	1,254	1,062	1,155
Nebraska	0	0	0	0	0
Nevada	0	0	0	0	0
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	0	0
New Mexico	0	0	0	0	0
New York	16,185	15,620	16,387	15,280	15,813
North Carolina	0	0	0	0	0
North Dakota	0	0	0	0	0
Ohio	593,171	407,820	446,502	287,349	399,596
Oklahoma	448,351	439,437	478,392	445,955	408,046
Oregon	0	0	0	0	0
Pennsylvania	67,844	59,578	54,801	50,436	55,090
Rhode Island	0	0	0	0	0
South Carolina	0	0	0	0	0
South Dakota	0	0	0	0	0
Tennessee	0	0	0	0	0
Texas	260,084	227,183	282,987	302,093	291,531
Utah	0	0	0	0	0
Vermont	0	0	0	0	0
Virginia	0	0	0	0	0
Washington	0	0	0	0	0
West Virginia	208,029	163,943	152,748	122,977	139,638
Wisconsin	0	0.	0	0	0
Wyoming	11,796	10,898	10,877	10,032	16,701
Total	2,383,280	1,928,396	2,096,496	1,845,342	2,271,980

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1923

Coal
(Net tons)

Month	1919	1920	1921	1922	1923
January	104,000	115,600	95,000	95,300	114,700
February	102,000	111,500	93,900	92,600	116,100
March	93,900	105,000	85,200	87,800	108,100
April	88,100	97,200	80,600	81,900	
May	85,300	91,100	77,900	79,700	
June	88,300	95,000	81,360	82,900	
July	85,700	94,800	79,400	82,700	
August	86,700	97,100	83,200	90,900	
September	92,200	100,100	86,300	96,600	
October	98,400	101,800	89,000	105,700	
November	112,500	105,200	92,600	111,900	
December	116,800	103,200	93,700	116,000	
Year	96,200	101,400	86,500	93,700	

Oil
(barrels)

Month	1919	1920	1921	1922	1923
January	21,900	41,600	28,900	35,700	40,500
February	21,900	40,300	27,900	35,600	41,500
March	20,400	34,200	27,400	30,600	38,300
April	19,400	30,400	28,100	27,500	
May	23,300	29,800	27,500	27,600	
June	29,000	35,900	30,500	30,700	
July	32,100	38,400	33,200	32,600	
August	34,600	38,700	37,600	42,300	
September	37,100	40,700	39,700	45,400	
October	39,000	37,700	38,100	42,200	
November	41,700	32,000	38,200	41,300	
December	40,800	30,600	38,400	42,200	
Year	30,300	35,900	33,000	36,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923
January	35,500	46,100	55,300	52,700	67,600
February	47,100	45,300	52,000	57,100	65,900
March	57,000	50,800	50,100	51,600	73,300
April	62,000	60,100	62,000	61,700	
May	62,100	68,400	64,300	71,400	
June	66,200	75,200	69,000	78,200	
July	66,400	83,700	62,400	84,100	
August	64,500	87,400	74,700	98,600	
September	63,400	90,500	78,900	104,200	
October	64,400	77,600	73,600	91,400	
November	60,700	63,600	73,800	79,400	
December	51,000	60,400	63,300	62,200	
Year	58,600	67,500	65,000	74,400	

The average daily production of electricity by public-utility power plants during the month of March was 152,000,000 kilowatt-hours, or 1.6 per cent less than the average daily output in February. The revised figure for the daily output in February is 154,400,000 kilowatt-hours, which now stands as the record rate of daily production of electricity by public-utility power plants in the United States.

The slight decrease in rate of production of electricity in March was probably due to the usual seasonal decrease in demand for electricity. It is not anticipated, however, that the seasonal decrease this year will be at all marked. On account of the pronounced activity in practically all lines of industry at the present time with every indication that this activity will continue, it is believed that the present rate of demand for electricity will continue through the spring and summer and that there will be an increase in demand in the fall months as usual.

The average daily production of electricity for the first three months of 1923 and the proportion produced by water power were as follows: January, 153,300,0 kilowatt-hours - 34 per cent; February, 154,400,000 kilowatt-hours - 33.9 per cent; and March, 152,000,000 kilowatt-hours - 36 per cent. The increase in the amount of water available for the use of hydroelectric power plants is reflected in the increase in the proportion of the total amount of electricity produced by the use of water power.

The curves on page 8 show the variations in the average daily output of electricity in kilowatt-hours by public-utility plants for each month and the tables on page 6 show the average daily consumption of the different fuels each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants each producing 10,000 kilowatt-hours or more per month engaged in public service, including central stations, electric railways, and certain other plants that contribute to the public supply. The capacity of plants submitting reports of their operations is about 95 per cent of the capacity of all plants listed. The output of plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, in the previous report are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small.

This report is subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

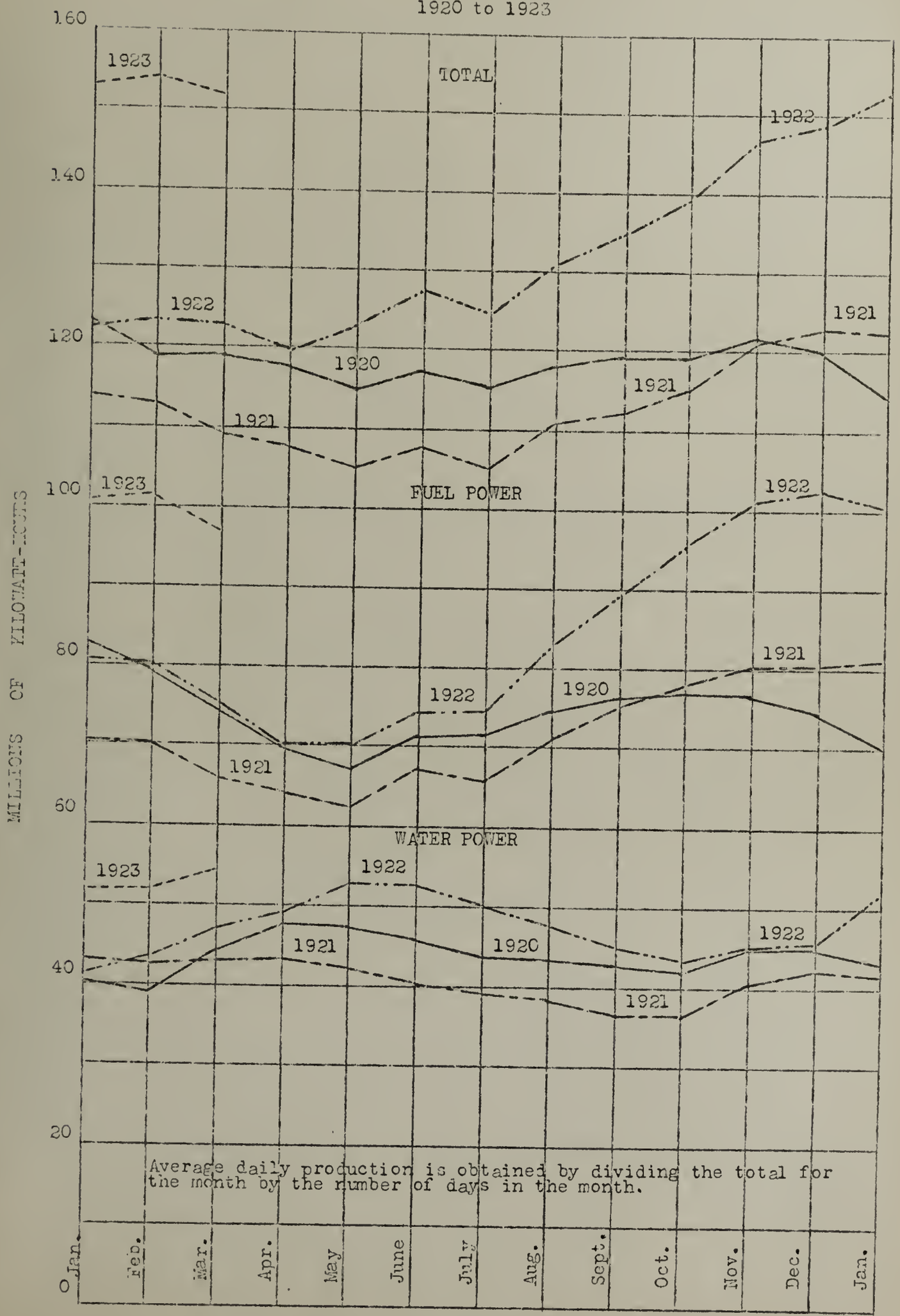
Prepared under the direction of A. H. Horton.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 to 1923



Average daily production is obtained by dividing the total for the month by the number of days in the month.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director — January 10, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR SEPTEMBER, OCTOBER, AND NOVEMBER, 1923.

Compiled by
Division of Power Resources, Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED

State	BY WATER POWER			BY FUELS		
	September	October	November	September	October	November
Alabama	29,963	17,779	32,082	43,799	70,010	47,386
Arizona	8,878	7,589	4,153	4,508	5,556	5,396
Arkansas	254	135	182	12,024	13,480	12,762
California	332,187	348,157	313,838	102,897	93,440	101,285
Colorado	19,035	20,970	18,897	20,172	20,939	21,966
Connecticut	4,661	7,598	14,505	63,899	65,394	54,093
Delaware	0	0	0	7,636	7,859	7,527
District of Columbia	0	0	0	24,806	25,756	25,799
Florida	931	1,121	845	12,633	14,304	15,231
Georgia	42,567	34,138	47,603	7,754	15,443	9,857
Idaho	67,597	52,019	52,198	140	140	176
Illinois	17,567	17,784	16,848	311,398	351,674	345,434
Indiana	2,989	2,973	3,342	100,385	107,278	107,413
Iowa	50,313	56,030	44,799	39,724	42,502	41,426
Kansas	1,749	2,203	2,462	45,027	47,780	42,795
Kentucky	8	8	8	29,260	31,976	32,328
Louisiana	0	0	0	22,897	24,815	25,117
Maine	26,984	30,594	32,814	6,509	7,391	3,964
Maryland	20	27	114	55,119	65,334	57,169
Massachusetts	12,304	19,743	36,124	144,891	163,287	148,124
Michigan	57,719	58,564	57,523	152,242	170,878	172,106
Minnesota	25,236	23,738	19,639	46,792	56,779	58,094
Mississippi	0	0	0	5,569	6,171	5,896
Missouri	577	1,198	5,312	84,978	94,140	90,690
Montana	85,157	85,062	89,458	730	776	771
Nebraska	2,166	2,333	2,296	25,566	26,822	25,280
Nevada	4,128	3,424	3,864	103	79	46
New Hampshire	6,923	9,413	14,817	4,218	4,496	3,097
New Jersey	58	95	146	89,444	112,711	112,481
New Mexico	55	75	81	1,431	1,552	1,545
New York	264,294	285,486	306,928	428,069	487,006	463,362
North Carolina	34,632	36,407	29,183	25,155	41,981	41,490
North Dakota	0	0	0	3,156	3,388	3,561
Ohio	1,906	1,346	2,096	285,574	315,662	310,616
Oklahoma	97	8	17	23,288	25,662	25,620
Oregon	27,224	32,634	31,695	25,063	24,458	24,203
Pennsylvania	29,247	27,621	35,209	388,431	433,737	423,526
Rhode Island	112	205	326	47,272	51,698	42,475
South Carolina	83,042	75,078	79,256	5,560	7,991	6,787
South Dakota	719	784	748	4,444	4,971	5,032
Tennessee	35,761	24,059	26,295	15,675	32,263	30,505
Texas	640	625	568	86,698	89,562	85,121
Utah	20,416	24,458	24,321	544	2,898	3,536
Vermont	8,677	11,078	13,536	1,426	1,429	224
Virginia	13,593	11,422	13,437	48,812	52,336	48,087
Washington	103,063	102,366	98,854	12,863	15,731	20,614
West Virginia	1,310	519	1,156	134,744	155,414	146,185
Wisconsin	40,101	38,327	37,566	62,499	69,383	66,589
Wyoming	579	644	634	3,664	3,934	3,919
Total	1,465,439	1,475,837	1,515,775	3,069,488	3,468,266	3,326,706
Total, by water power and fuels				4,534,927	4,944,103	4,842,481

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during November are as follows: Alabama, 65,000; Arkansas, 229,000; Florida, 243,000; Georgia, 493,000; Louisiana, 139,000; Minnesota, 623,000; Mississippi, 1,007,000; Oregon, 22,752,000; South Carolina, 47,000; Washington, 3,197,000; Wisconsin, 287,000; and all other States (Arizona, California, Idaho, Indiana, Maine, Michigan, Missouri, Montana, New Mexico, and Texas), 2,632,000.

Electric power produced during September, October, and November, 1923, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons		
	September	October	November
Alabama	46,451	68,963	48,965
Arizona	0	0	0
Arkansas	9,141	10,050	10,531
California	0	0	0
Colorado	33,855	34,625	35,823
Connecticut	72,799	74,856	63,246
Delaware	8,686	8,868	8,193
District of Columbia	20,693	21,878	22,069
Florida	1,603	1,902	1,543
Georgia	6,293	17,436	9,065
Idaho	0	0	0
Illinois	408,516	458,705	440,860
Indiana	175,772	189,197	197,857
Iowa	79,603	85,223	83,650
Kansas	19,486	18,180	19,116
Kentucky	43,214	47,866	47,962
Louisiana	7,618	8,408	9,179
Maine	1,247	1,547	1,717
Maryland	50,655	58,816	50,295
Massachusetts	131,095	146,549	128,859
Michigan	150,015	163,263	164,863
Minnesota	58,029	68,746	70,650
Mississippi	8,377	9,194	8,776
Missouri	123,677	133,882	131,307
Montana	3,718	3,718	3,996
Nebraska	31,594	34,451	31,284
Nevada	0	0	0
New Hampshire	4,649	5,068	3,746
New Jersey	95,215	117,955	122,287
New Mexico	2,699	3,075	3,557
New York	421,155	465,936	447,029
North Carolina	33,745	55,151	50,269
North Dakota	12,514	14,317	15,117
Ohio	318,811	357,690	366,335
Oklahoma	4,789	5,458	5,014
Oregon	128	127	135
Pennsylvania	447,127	489,879	476,397
Rhode Island	7,461	8,529	8,688
South Carolina	9,812	13,448	12,183
South Dakota	7,491	8,165	8,029
Tennessee	27,783	47,472	44,801
Texas	20,959	22,072	19,745
Utah	1,140	4,181	4,863
Vermont	482	398	84
Virginia	51,594	54,785	51,159
Washington	4,206	8,408	12,404
West Virginia	127,738	140,783	136,954
Wisconsin	69,097	75,504	72,923
Wyoming	7,493	8,157	8,892
Total	3,168,225	3,572,881	3,460,417

State	Fuel oil - barrels 1923			Natural gas Thousands of cubic feet		
	september	October	November	September	October	November
Alabama	3,322	3,054	2,937	0	0	0
Arizona	19,076	22,709	20,736	0	0	0
Arkansas	20,807	26,892	25,686	160,315	161,942	148,830
California	323,160	295,364	326,884	776,016	663,513	642,963
Colorado	0	0	0	0	0	0
Connecticut	1,415	1,536	979	0	0	0
Delaware	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0
Florida	67,735	76,911	80,333	0	0	0
Georgia	24,252	30,150	26,048	0	0	0
Idaho	0	0	0	0	0	0
Illinois	919	1,087	1,280	0	0	0
Indiana	458	622	659	2,854	2,336	1,853
Iowa	1,952	1,651	1,931	0	0	0
Kansas	107,286	117,609	118,060	339,997	325,276	193,478
Kentucky	2,604	1,450	534	21,287	14,351	10,837
Louisiana	48,969	54,475	50,881	110,863	115,532	112,155
Maine	25,953	28,540	15,628	0	0	0
Maryland	0	0	0	0	0	0
Massachusetts	49,830	55,222	53,769	0	0	0
Michigan	729	839	972	0	0	0
Minnesota	851	801	1,052	0	0	0
Mississippi	11,977	12,737	12,489	0	0	0
Missouri	16,082	24,247	24,058	0	0	0
Montana	300	287	277	1,083	1,258	1,276
Nebraska	22,047	22,489	22,643	0	0	0
Nevada	359	320	162	0	0	0
New Hampshire	0	0	0	0	0	0
New Jersey	516	620	561	0	0	0
New Mexico	990	656	502	0	0	0
New York	32,281	31,519	22,827	14,333	14,285	13,482
North Carolina	389	389	329	0	0	0
North Dakota	267	305	323	0	0	0
Ohio	410	668	671	643,828	450,099	1117,926
Oklahoma	46,559	51,267	47,526	480,673	496,292	504,039
Oregon	5,875	7,389	7,578	0	0	0
Pennsylvania	403	1,430	524	35,388	34,066	37,355
Rhode Island	151,980	163,159	127,189	0	0	0
South Carolina	0	253	0	0	0	0
South Dakota	2,748	3,452	4,528	0	0	0
Tennessee	110	203	0	0	0	0
Texas	281,386	286,616	290,504	397,085	376,125	229,449
Utah	0	0	0	0	0	0
Vermont	10,632	10,208	1,730	0	0	0
Virginia	427	447	436	0	0	0
Washington	35,243	35,684	47,918	0	0	0
West Virginia	0	0	0	203,105	217,743	178,649
Wisconsin	308	358	466	0	0	0
Wyoming	6,338	6,633	7,071	9,710	10,034	8,364
Total	1,326,890	1,380,248	1,348,681	3,196,537	2,882,852	2,200,656

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1923

Coal
(Net tons)

Month	1919	1920	1921	1922	1923
January	104,000	115,600	95,000	95,300	114,700
February	102,000	111,500	93,900	92,600	116,000
March	93,900	105,000	85,200	87,800	108,100
April	88,100	97,200	80,600	81,900	96,900
May	85,300	91,100	77,900	79,700	95,100
June	88,300	95,000	81,360	82,900	98,400
July	85,700	94,800	79,400	82,700	98,000
August	86,700	97,100	83,200	90,900	103,500
September	92,200	100,100	86,300	96,600	105,600
October	98,400	101,800	89,000	105,700	115,300
November	112,500	105,200	92,600	111,900	113,300
December	116,800	103,200	93,700	116,000	
Year	96,200	101,400	86,500	93,700	

Oil
(barrels)

Month	1919	1920	1921	1922	1923
January	21,900	41,600	28,900	35,700	40,500
February	21,900	40,300	27,900	35,600	41,600
March	20,400	34,200	27,400	30,600	35,200
April	19,400	30,400	28,100	27,500	32,700
May	23,300	29,800	27,500	27,600	32,600
June	29,000	35,900	30,500	30,700	34,500
July	32,100	38,400	33,200	32,600	37,900
August	34,600	38,700	37,600	42,300	43,600
September	37,100	40,700	39,700	45,400	44,200
October	39,000	37,700	38,100	42,200	44,600
November	41,700	32,000	38,200	41,300	45,000
December	40,800	30,600	38,400	42,200	
Year	30,300	35,900	33,000	36,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923
January	35,500	46,100	55,300	52,700	67,600
February	47,100	45,300	52,000	57,100	65,100
March	57,000	50,800	50,100	51,600	73,300
April	62,000	60,100	62,000	61,700	76,600
May	62,100	68,400	64,300	71,400	88,400
June	66,200	75,200	69,000	78,200	95,400
July	66,400	83,700	62,400	84,100	102,300
August	64,500	87,400	74,700	98,600	109,000
September	63,400	90,500	78,900	104,200	106,600
October	64,400	77,600	73,600	91,400	93,000
November	60,700	63,600	73,800	79,400	73,400
December	51,000	60,400	63,300	62,200	
Year	58,600	67,500	65,000	74,400	

The average daily production of electricity by electric public-utility power plants in November again surpassed all previous records with an output of 161,400,000 kilowatt-hours per day, exceeding the revised maximum rate established in October by a little more than one per cent. An examination of the curve of average daily output on page 6 shows that the increase in the average daily output per month during the latter half of 1923 was considerably less than that for the same period in 1922. The average increase in the rate of output for the five months from July to November in 1922 was 5,525,000 kilowatt-hours per day per month while in 1923 the increase was 3,775,000 kilowatt-hours per day per month. The curve of daily output by the use of water power for 1923 shows an increase in November, as compared with October, which indicates the end of the low-water season for 1923.

The average daily production of electricity for each of the first eleven months of 1923 and the proportion produced by water power were as follows: January, 153,300,000 kilowatt-hours, 34 per cent; February, 154,400,000 kilowatt-hours, 33.9 per cent; March, 152,500,000 kilowatt-hours, 36.3 per cent; April, 149,100,000 kilowatt-hours, 39.9 per cent; May, 150,100,000 kilowatt-hours, 41.3 per cent; June, 150,800,000 kilowatt-hours, 38.9 per cent; July, 146,300,000 kilowatt-hours, 36.4 per cent; August, 150,600,000 kilowatt-hours, 33.6 per cent; September, 151,200,000 kilowatt-hours, 32.3 per cent; October, 159,500,000 kilowatt-hours, 30 per cent; November, 161,400,000 kilowatt-hours, 31.3 per cent.

The curves on page 6 show the average daily output of electricity in kilowatt-hours by public-utility plants for each month and for each of the last four years. The tables on page 4 show the average daily consumption of the different fuels each month from 1919 to date.

The quantities in the tables are based on returns received from about 3,500 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants that contribute to the public supply. Reports were received from plants representing 97 per cent of the total capacity. The output for those plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in the previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

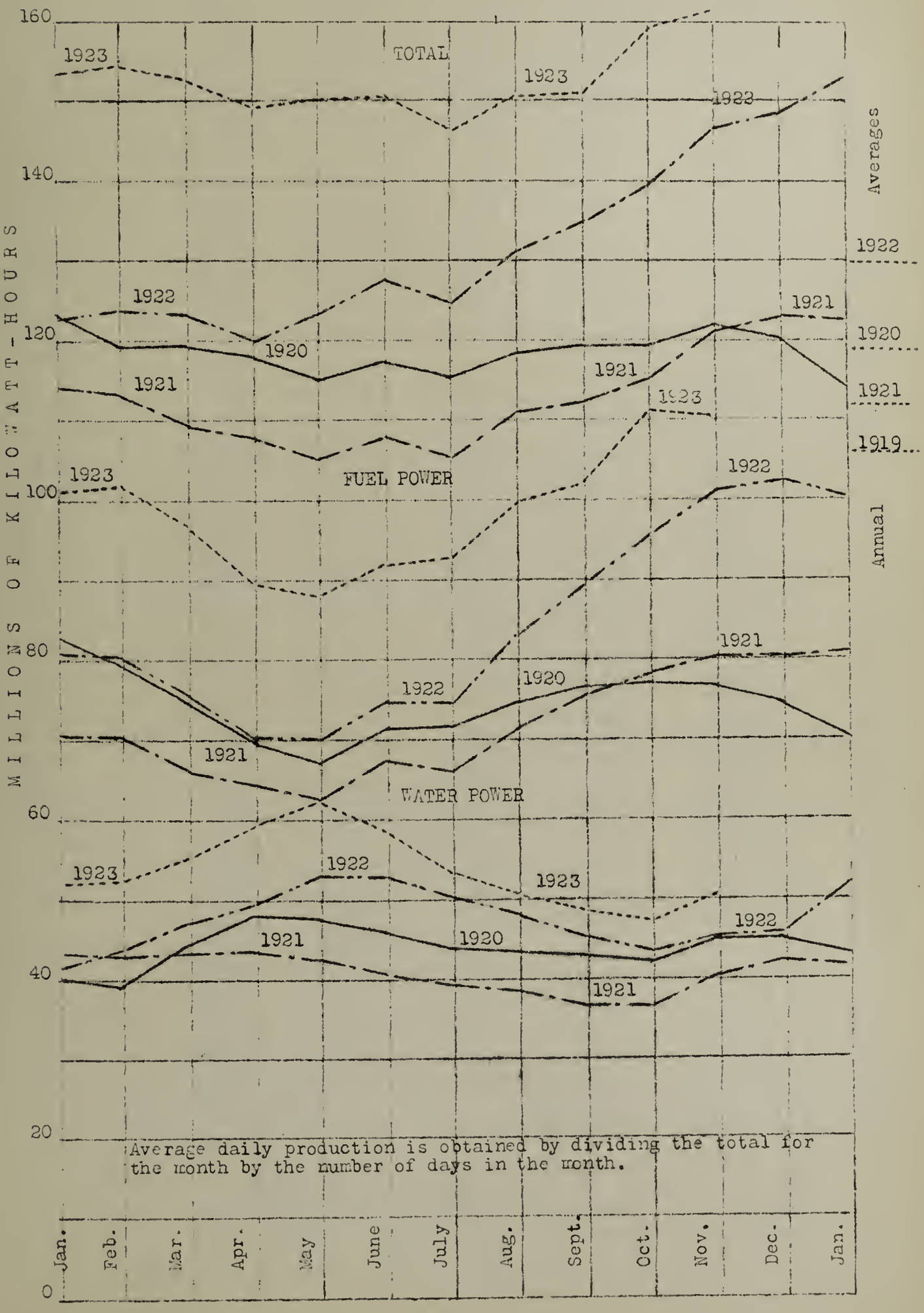
Prepared under the direction of A. H. Horton.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 to 1923.



Average daily production is obtained by dividing the total for the month by the number of days in the month.

Cop 2

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

February 2, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR OCTOBER, NOVEMBER, AND DECEMBER, 1923.

Compiled by
Division of Power Resources, Geological Survey.

THOUSANDS OF KILOWATT-HOURS PRODUCED

State	BY WATER POWER			BY FUELS		
	October	November	December	October	November	December
Alabama	17,779	32,022	65,933	70,010	47,386	6,875
Arizona	7,589	4,153	4,165	5,556	5,396	5,047
Arkansas	135	182	316	13,480	12,762	12,893
California	348,157	302,132	287,901	93,447	108,635	128,386
Colorado	20,970	18,897	16,804	20,939	21,966	25,002
Connecticut	7,598	14,505	19,613	65,432	54,008	51,829
Delaware	0	0	0	7,859	7,527	7,482
District of Columbia	0	0	0	25,756	25,799	26,916
Florida	1,121	845	655	14,328	15,382	16,718
Georgia	34,138	47,548	52,719	15,443	9,857	8,906
Idaho	52,019	52,198	59,278	140	176	65
Illinois	17,784	16,848	17,503	351,895	345,434	362,808
Indiana	2,973	3,342	5,249	107,232	107,413	106,761
Iowa	56,030	44,517	44,776	42,502	41,749	42,737
Kansas	2,203	2,462	2,889	47,608	42,806	41,352
Kentucky	8	8	8	31,976	32,059	32,394
Louisiana	0	0	0	24,815	25,117	25,996
Maine	30,594	32,814	37,142	7,391	3,964	861
Maryland	27	114	232	65,334	57,169	31,904
Massachusetts	19,767	36,326	44,871	163,287	148,119	145,171
Michigan	58,862	57,859	62,479	172,069	172,110	173,371
Minnesota	23,753	19,639	14,763	56,818	58,155	61,616
Mississippi	0	0	0	6,171	5,964	6,019
Missouri	1,198	5,312	7,733	94,165	90,677	92,208
Montana	85,062	89,458	95,656	776	771	826
Nebraska	2,333	2,297	2,198	26,822	25,280	26,342
Nevada	3,424	3,864	3,948	79	46	78
New Hampshire	9,423	14,829	20,390	4,496	3,097	2,278
New Jersey	95	146	229	112,711	112,481	114,105
New Mexico	75	81	70	1,552	1,541	1,620
New York	285,486	302,458	345,483	487,006	463,362	458,324
North Carolina	35,455	28,422	30,825	43,432	42,637	32,856
North Dakota	0	0	0	3,388	3,561	3,549
Ohio	1,346	2,096	4,251	315,672	310,171	308,719
Oklahoma	8	17	33	25,662	25,627	26,518
Oregon	32,634	31,695	42,970	24,458	24,203	15,073
Pennsylvania	27,621	35,285	64,113	434,048	423,461	422,950
Rhode Island	205	326	890	51,698	42,475	34,832
South Carolina	75,078	79,121	81,402	7,991	6,787	5,286
South Dakota	784	748	457	4,991	5,054	5,820
Tennessee	24,059	26,295	36,932	32,263	30,505	18,189
Texas	625	568	417	89,562	85,092	88,194
Utah	24,458	24,321	21,728	2,898	3,536	4,327
Vermont	11,078	13,536	15,364	1,429	224	107
Virginia	7,810	11,594	17,872	56,577	50,086	43,608
Washington	102,366	98,842	118,853	15,731	20,614	9,872
West Virginia	519	1,156	2,057	155,414	146,185	147,175
Wisconsin	38,327	37,634	37,352	69,383	66,597	69,464
Wyoming	644	634	598	3,934	3,919	4,016
Total	1,471,620	1,497,146	1,689,117	3,478,626	3,336,942	3,257,445
Total, by water power and fuels				4,950,246	4,834,088	4,946,562

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during December are as follows: Alabama, 57,000; Arkansas, 190,000; Florida, 506,000; Georgia, 569,000; Louisiana, 141,000; Minnesota, 562,000; Mississippi, 319,000; Oregon, 13,446,000; South Carolina, 45,000; Washington, 2,818,000; Wisconsin, 306,000; and all other States (Arizona, California, Idaho, Indiana, Maine, Michigan, Missouri, Montana, and New Mexico), 2,435,000.

Electric power produced during October, November, and December, 1923, required the combustion of fuels in the quantities indicated in the following tables:

State	Coal - short tons		
	1923		
	October	November	December
Alabama	68,963	48,965	10,772
Arizona	0	0	0
Arkansas	10,050	10,531	10,915
California	0	0	0
Colorado	34,625	35,823	40,661
Connecticut	74,921	63,155	65,031
Delaware	8,868	8,193	8,423
District of Columbia	21,878	22,069	22,654
Florida	1,902	1,543	1,556
Georgia	17,436	9,065	7,223
Idaho	0	0	0
Illinois	459,002	440,860	460,630
Indiana	189,536	197,857	195,933
Iowa	85,223	85,592	87,731
Kansas	18,100	19,116	18,492
Kentucky	47,866	47,890	49,092
Louisiana	8,408	9,179	7,688
Maine	1,547	1,717	2,377
Maryland	58,816	50,295	29,478
Massachusetts	147,589	129,959	128,119
Michigan	165,363	164,855	165,751
Minnesota	68,887	70,955	77,729
Mississippi	9,194	8,866	9,582
Missouri	133,942	131,307	135,121
Montana	3,718	3,996	4,235
Nebraska	33,451	31,284	33,255
Nevada	0	0	0
New Hampshire	5,068	3,746	3,257
New Jersey	117,955	122,287	121,769
New Mexico	3,075	3,442	3,532
New York	465,936	447,029	427,370
North Carolina	56,252	51,065	41,369
North Dakota	14,317	15,122	15,669
Ohio	357,923	365,440	350,267
Oklahoma	5,458	5,014	4,938
Oregon	127	135	140
Pennsylvania	491,218	476,008	470,798
Rhode Island	8,529	8,688	9,144
South Carolina	13,448	12,183	10,706
South Dakota	8,165	8,069	9,411
Tennessee	47,472	44,691	32,782
Texas	22,072	19,745	20,483
Utah	4,181	4,863	4,634
Vermont	398	84	28
Virginia	54,944	51,765	51,342
Washington	8,408	12,404	5,009
West Virginia	140,783	136,954	141,991
Wisconsin	75,504	72,923	74,758
Wyoming	8,157	8,892	8,582
Total	3,578,675	3,463,731	3,380,427

State	Fuel oil - barrels 1923			Natural gas Thousands of cubic feet		
	October	November	December	October	November	December
Alabama	3,054	2,937	2,994	0	0	0
Arizona	22,709	20,736	20,988	0	0	0
Arkansas	26,892	25,686	23,643	161,942	148,830	163,076
California	295,399	359,666	416,397	663,513	642,963	853,930
Colorado	0	0	0	0	0	0
Connecticut	1,536	979	682	0	0	0
Delaware	0	0	0	0	0	0
District of Columbia	0	0	0	0	0	0
Florida	76,854	80,020	86,875	0	0	0
Georgia	30,150	26,048	24,262	0	0	0
Idaho	0	0	0	0	0	0
Illinois	1,087	1,280	1,189	0	0	0
Indiana	622	659	770	2,336	1,853	1,605
Iowa	1,651	1,930	1,845	0	0	0
Kansas	117,028	118,074	121,528	337,227	195,151	164,304
Kentucky	1,450	534	530	14,351	10,837	15,365
Louisiana	54,475	50,881	61,727	115,532	112,155	109,235
Maine	28,540	15,628	3,988	0	0	0
Maryland	0	0	0	0	0	0
Massachusetts	55,222	53,769	50,370	0	0	0
Michigan	839	972	815	0	0	0
Minnesota	801	1,052	1,104	0	0	0
Mississippi	12,737	12,489	13,374	0	0	0
Missouri	24,122	23,934	27,482	0	0	0
Montana	287	277	291	1,258	1,276	1,301
Nebraska	22,489	22,643	24,530	0	0	0
Nevada	320	162	210	0	0	0
New Hampshire	0	0	0	0	0	0
New Jersey	620	561	574	0	0	0
New Mexico	656	572	575	0	0	0
New York	31,519	22,827	23,616	14,285	13,482	12,981
North Carolina	389	329	210	0	0	0
North Dakota	305	323	304	0	0	0
Ohio	668	671	680	450,099	117,926	294,358
Oklahoma	50,194	46,451	50,244	497,365	505,769	497,082
Oregon	7,389	7,578	7,889	0	0	0
Pennsylvania	1,462	524	520	34,066	37,355	30,435
Rhode Island	163,159	127,189	101,463	0	0	0
South Carolina	253	254	270	0	0	0
South Dakota	3,534	4,610	3,849	0	0	0
Tennessee	203	203	203	0	0	0
Texas	286,616	290,536	292,588	376,125	229,449	250,650
Utah	0	0	0	0	0	0
Vermont	10,208	1,730	870	0	0	0
Virginia	447	436	370	0	0	0
Washington	35,684	47,918	27,368	0	0	0
West Virginia	0	0	0	217,743	178,649	117,685
Wisconsin	358	466	432	0	0	0
Wyoming	6,633	7,071	6,874	10,034	8,364	8,801
Total	1,378,564	1,380,605	1,404,493	2,895,876	2,204,059	2,520,808

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1923

Coal
(Net tons)

Month	1919	1920	1921	1922	1923
January	104,000	115,600	95,000	95,300	114,700
February	102,000	111,500	93,900	92,600	116,000
March	93,900	105,000	85,200	87,300	108,100
April	88,100	97,200	80,600	81,900	96,900
May	85,300	91,100	77,900	79,700	95,100
June	88,300	95,000	81,360	82,900	98,400
July	85,700	94,800	79,400	82,700	98,000
August	86,700	97,100	83,200	90,900	103,500
September	92,200	100,100	86,300	96,600	105,600
October	98,400	101,800	89,000	105,700	115,400
November	112,500	105,200	92,600	111,900	115,500
December	116,800	103,200	93,700	116,000	109,000
Year	96,200	101,400	86,500	93,700	106,500

Oil
(barrels)

Month	1919	1920	1921	1922	1923
January	21,900	41,600	28,900	35,700	40,500
February	21,900	40,300	27,900	35,600	41,600
March	20,400	34,200	27,400	30,600	35,200
April	19,400	30,400	28,100	27,500	32,700
May	23,300	29,800	27,500	27,600	32,600
June	29,000	35,900	30,500	30,700	34,500
July	32,100	38,400	33,200	32,600	37,900
August	34,600	38.700	37,600	42,300	43,600
September	37,100	40,700	39,700	45,400	44,200
October	39,000	37.700	38,100	42,200	44,500
November	41,700	32,000	38,200	41,300	46,000
December	40,800	30,600	38,400	42,200	45,300
Year	30,300	35,900	33,000	36,200	40,000

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923
January	35,500	46,100	55,300	52,700	67,600
February	47,100	45,300	52,000	57,100	65,100
March	57,000	50,800	50,100	51,600	73,300
April	62,000	60,100	62,000	61,700	76,600
May	62,100	68,400	64,300	71,400	88,400
June	66,200	75,200	69,000	78,200	95,400
July	66,400	83,700	62,400	84,100	102,300
August	64,500	87,400	74,700	98,600	109,000
September	63,400	90,500	78,900	104,200	106,600
October	64,400	77,600	73,600	91,400	93,400
November	60,700	63,600	73,800	79,400	73,500
December	51,000	60,400	63,300	62,200	81,300
Year	58,600	67,500	65,000	74,400	86,200

Production of electricity by public-utility power plants in the United States
1923

1923	Water Kilowatt-hours	Fuel Kilowatt-hours	Total Kilowatt-hours
January	1,620,311,000	3,133,515,000	4,753,826,000
February	1,467,710,000	2,856,568,000	4,324,278,000
March	1,719,362,000	3,008,602,000	4,727,964,000
April	1,783,281,000	2,689,664,000	4,472,945,000
May	1,920,414,000	2,732,944,000	4,653,358,000
June	1,758,546,000	2,764,685,000	4,523,231,000
July	1,652,595,000	2,883,806,000	4,536,401,000
August	1,570,160,000	3,099,870,000	4,670,030,000
September	1,465,439,000	3,069,488,000	4,534,927,000
October	1,471,620,000	3,478,626,000	4,950,246,000
November	1,497,146,000	3,336,942,000	4,834,088,000
December	1,689,117,000	3,257,445,000	4,946,562,000
Total	19,615,701,000	36,312,155,000 a/	55,927,856,000

a/ Includes 258,667,000 kilowatt-hours produced by wood-burning plants.

Consumption of fuel by public- utility power plants in the United States
1923

1923	Coal Tons	Oil Bbls.	Gas M cu.ft.
January	3,556,807	1,255,973	2,096,496
February	3,248,979	1,165,769	1,823,411
March	3,351,167	1,151,107	2,271,937
April	2,967,037	980,646	2,297,450
May	2,947,534	1,011,558	2,741,470
June	2,952,677	1,035,724	2,860,449
July	3,037,006	1,174,023	3,170,248
August	3,209,040	1,352,339	3,377,973
September	3,168,225	1,326,890	3,196,537
October	3,578,675	1,378,564	2,895,876
November	3,463,731	1,380,605	2,204,059
December	3,380,427	1,404,493	2,520,808
Total	38,861,305	14,617,691	31,456,714

ANNUAL PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1923

Year	Total		Water Power			Fuel Power		
	Kilowatt-hours	Change from previous year (per cent)	Kilowatt-hours	Per cent of total	Change from previous year (per cent)	Kilowatt-hours	Per cent of total	Change from previous year (per cent)
1919	38,921,000,000	------	14,606,000,000	37.5	------	24,315,000,000	62.5	-----
1920	43,555,000,000	+11.9	16,150,000,000	37.1	+10.6	27,405,000,000	62.9	+12.7
1921	40.976,000,000	- 5.9	14,971,000,000	36.5	- 7.3	26,005,000,000	63.5	- 5.1
1922	47,659,000,000	+16.3	17,206,000,000	36.1	+14.9	30,453,000,000	63.9	+17.1
1923	55,928,000,000	+17.4	19,616,000,000	35.1	+14.0	36,312,000,000	64.9	+19.2

ANNUAL CONSUMPTION OF FUEL IN THE PRODUCTION OF ELECTRICITY BY PUBLIC -UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1923

Year	Coal		Fuel oil		Gas	
	Short tons	Change from previous year (per cent)	Barrels	Change from previous year (per cent)	M cubic feet	Change from previous year (per cent)
1919	35,100,000	------	11,050,000	-----	21,406,000	------
1920	37,124,000	+ 5.8	13,123,000	+18.8	24,702,000	+15.4
1921	31,585,000	-14.9	12.045,000	- 8.2	23,722,000	- 4.0
1922	34,179,000	+ 8.3	13,197,000	+ 9.6	27,172,000	+14.5
1923	38,861,000	+13.7	14,618,000	+10.8	31,457,000	+15.8

AVERAGE CONSUMPTION OF COAL PER KILOWATT-HOUR BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1923

Year	Output by the use of fuel a/ (Kilowatt-hours)	Consumption of coal and its equivalent b/ in other fuels		
		Net tons	Pounds per Kilowatt-hour	Percentage of 1919 rate
1919	24,176,000,000	38,880,000	3.2	100
1920	27,248,000,000	41,420,000	3.0	94
1921	25,863,000,000	35,240,000	2.7	84
1922	30,240,000,000	38,000,000	2.5	78
1923	36,053,000,000	43,365,000	2.4	75

a/ Coal, oil, and gas
b/ 1 ton coal = 4 bbl. oil = 35,000 cu ft. of gas (approximately).

Note: 1923 figures are preliminary and are subject to revision

The total production of electricity by public-utility power plants for 1923 was 55,928,000,000 kilowatt-hours, an increase of more than 17 per cent over the output for 1922. The output in kilowatt-hours for each of the past five years and the per cent produced by water power were as follows:

1919	38,921,000,000	37.5
1920	43,555,000,000	37.1
1921	40,976,000,000	36.5
1922	47,659,000,000	36.1
1923	55,928,000,000	35.1

These figures indicate that water power apparently is not holding its own as the percentage has decreased from 37.5 in 1919 to 35.1 in 1923. The production of electricity by the use of water power, however, is dependent production of electricity by the use of water power, however, is dependent upon the amount of water available for use of water-power plants and serious droughts have occurred in the past two years in different sections of the country which have materially affected the flow of the streams in those sections, which has reduced the utilization of the full capacity of water-power plants. A season of normal or abundant water supply for the entire country would have a direct effect upon the output of electricity by water power at public-utility plants.

The amount of electricity produced by the use of water power in 1923 at public-utility power plants would have required the consumption of about 23,500,000 tons of coal. This is equivalent to nearly 1,300 car loads per day.

There was a small increase in the efficiency in utilization of fuel during 1923 as compared with 1922, as the average rate of consumption of coal in 1923 was about 2.4 pounds per kilowatt-hour as compared with 2.5 pounds in 1922. Even this small gain is equivalent to 1.8 million tons of coal during the year.

The tables on page 6 show the annual production of electricity, consumption of fuels, and rates of consumption of equivalent coal from 1919 to 1923.

The average daily output in December showed a decrease of about 1 per cent from the November rate. The curves on page 8 show a decided increase in the average daily production of electricity by the use of water power during the month and a corresponding decrease in the production of electricity by the use of fuel. The average daily production of electricity in kilowatt- hours and the per cent produced by water power for each month in 1923 were as follows:

January	153,300,000	34.0	July	146,300,000	36.4
February	154,400,000	33.9	August	150,600,000	33.6
March	152,500,000	36.3	September	151,200,000	32.3
April	149,100,000	39.9	October	159,700,000	29.7
May	150,100,000	41,3	November	161,100,000	31,0
June	150,800,000	38.9	December	159,600,000	34.1

The curves on page 8 show the average daily output of electricity in kilowatt- hours by public-utility power plants for each month for each of the last four years. The tables on page 5 show the production of electricity and consumption of fuel for each month in 1923.

The quantities in the tables are based on returns received from about 3,500 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in public service, including central stations, electric railways, and certain other plants that contribute to the public supply. Reports were received from plants representing 97 per cent of the total capacity. The output for those plants that do not report is estimated.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in the previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

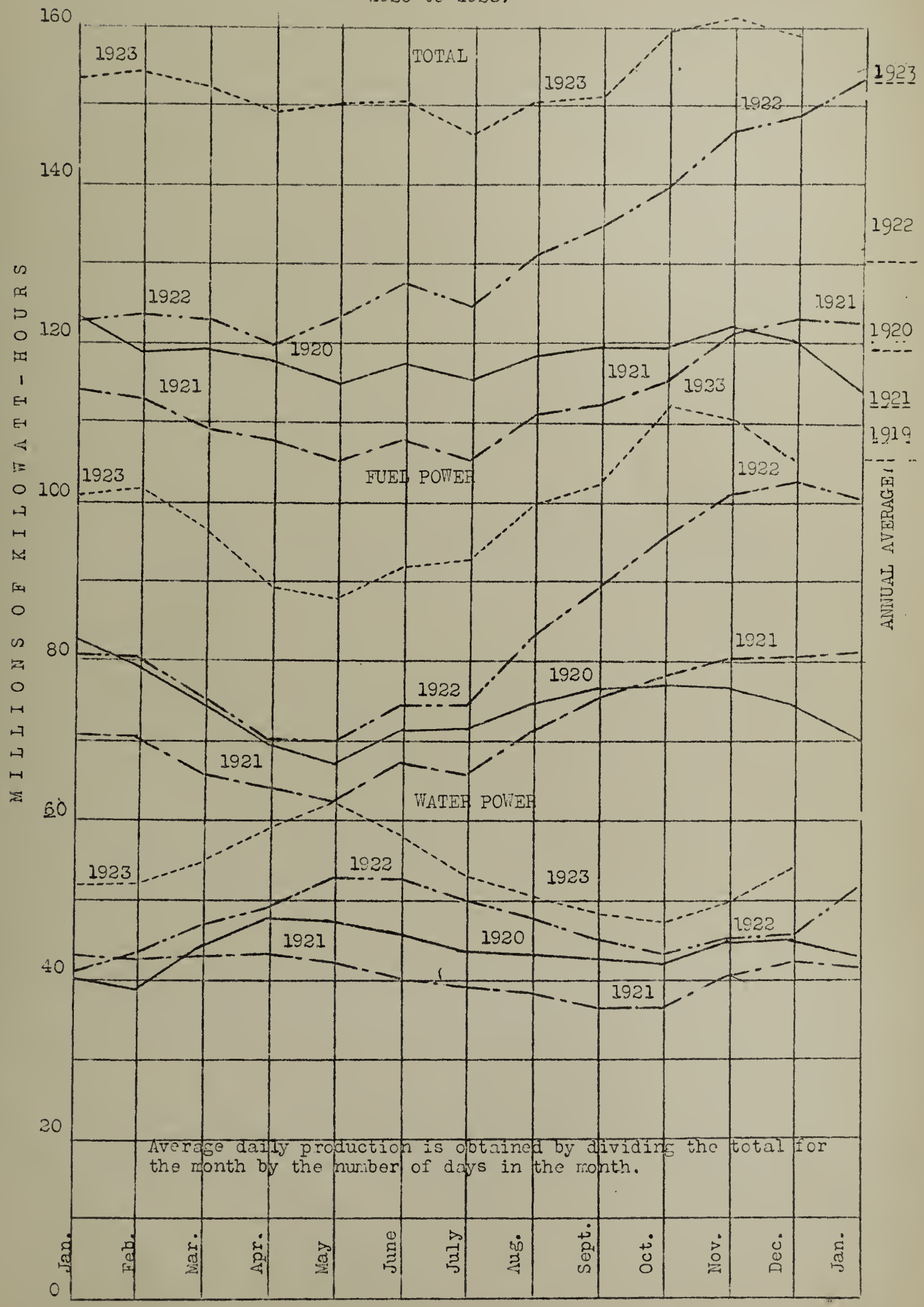
Prepared under the direction of A. H. Horton.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS

IN UNITED STATES

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 to 1923.



Average daily production is obtained by dividing the total for the month by the number of days in the month.

3.705

THE LIBRARY OF THE
MAY 1923
UNIVERSITY OF ILLINOIS

217251

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

June 3, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR FEBRUARY, MARCH, AND APRIL, 1924.

Compiled by Division of Power Resources, Geological Survey.

THOUSAND OF KILOWATT-HOURS

Division and State	BY WATER POWER			BY FUELS			TOTAL		
	February	March	April	February	March	April	February	March	April
United States	1,562,947	1,711,935	1,846,368	3,270,796	3,269,257	2,904,507	4,833,743	4,981,192	4,750,875
New England	104,893	126,518	140,719	269,624	243,365	206,363	374,517	369,883	347,082
Middle Atlantic	365,567	415,328	425,488	979,337	982,979	918,155	1,344,904	1,398,307	1,343,643
East North Central	108,165	175,853	183,498	1,031,538	1,050,204	949,089	1,139,703	1,184,057	1,132,587
West North Central	68,511	90,662	107,656	254,414	235,146	190,921	322,925	325,808	298,577
South Atlantic	189,342	217,046	212,598	316,549	290,781	263,480	505,891	507,827	476,078
East South Central	110,541	110,078	105,458	60,345	59,372	55,708	170,886	169,450	161,166
West South Central	909	938	717	145,973	150,648	145,339	146,882	151,586	146,056
Mountain	198,856	206,026	204,159	35,611	36,473	31,511	234,467	242,499	235,670
Pacific	416,163	411,486	466,075	177,405	220,289	143,941	593,568	631,775	610,016
New England									
Maine	37,614	40,600	38,562	1,632	773	469	39,246	41,373	39,031
New Hampshire	12,598	16,728	19,739	2,816	1,794	1,338	15,414	18,522	21,077
Vermont	13,459	13,826	13,157	278	232	293	13,737	14,058	13,450
Massachusetts	29,672	35,564	44,869	151,370	146,961	126,631	181,042	182,525	171,500
Rhode Island	495	847	967	49,975	34,855	29,593	50,470	35,702	30,560
Connecticut	11,055	18,953	23,425	63,553	58,750	48,039	74,608	77,703	71,464
Middle Atlantic									
New York	312,141	346,470	357,730	451,354	446,410	407,076	763,495	792,880	764,806
New Jersey	193	214	212	106,361	108,156	100,406	106,554	108,370	100,618
Pennsylvania	53,233	68,644	67,546	421,622	428,413	410,673	474,855	497,057	478,219
East North Central									
Ohio	3,496	3,980	3,495	309,550	317,733	296,839	313,046	321,713	300,334
Indiana	5,735	7,068	6,642	100,390	100,829	93,339	106,125	107,897	99,981
Illinois	15,411	17,631	17,150	368,389	382,275	352,601	383,800	399,906	369,751
Michigan	52,884	66,242	78,499	183,279	177,326	151,389	236,163	243,568	229,888
Wisconsin	30,639	38,932	77,712	69,930	72,041	54,921	100,569	110,973	132,633

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	February	March	April	February	March	April	February	March	April
West North Central									
Minnesota	9,500	13,852	32,721	61,759	54,778	21,817	71,259	68,630	54,538
Iowa	47,976	66,317	63,678	38,952	38,405	34,653	86,928	104,722	98,331
Missouri	5,949	5,486	5,408	80,151	68,148	64,374	86,100	73,634	69,782
North Dakota	0	0	0	3,199	3,092	2,645	3,199	3,092	2,645
South Dakota	526	580	1,430	4,884	4,808	3,510	5,410	5,388	4,940
Nebraska	1,826	1,984	2,145	24,335	24,597	23,240	26,161	26,581	25,385
Kansas	2,734	2,443	2,274	41,134	41,318	40,682	43,868	43,761	42,956
South Atlantic									
Delaware	0	0	0	7,382	7,449	6,974	7,382	7,449	6,974
Maryland	310	295	338	39,818	30,747	27,315	40,128	31,042	27,653
District of Columbia	0	0	0	25,752	26,249	24,338	25,752	26,249	24,838
Virginia	22,132	27,872	28,289	39,625	35,373	31,445	61,757	63,245	59,734
West Virginia	2,707	2,606	2,283	153,771	157,922	141,285	156,478	160,528	143,568
North Carolina	36,550	41,744	36,749	19,394	4,393	4,199	55,944	46,137	40,948
South Carolina	71,755	86,692	86,360	5,249	3,388	3,159	77,004	90,080	89,519
Georgia	55,106	56,758	57,504	7,824	7,556	7,047	62,930	64,314	64,551
Florida	782	1,079	1,075	17,734	17,704	17,218	18,516	18,783	18,293
East South Central									
Kentucky	16	18	18	33,128	33,304	30,166	33,144	33,322	30,184
Tennessee	45,002	42,089	40,440	15,000	15,351	15,327	60,002	57,440	55,767
Alabama	65,523	67,971	65,000	6,681	5,235	4,791	72,204	73,206	69,791
Mississippi	0	0	0	5,536	5,482	5,424	5,536	5,482	5,424
West South Central									
Arkansas	340	277	119	11,772	11,744	10,336	12,112	12,021	10,455
Louisiana	0	0	0	24,728	25,021	23,549	24,728	25,021	23,549
Oklahoma	36	45	34	25,173	25,860	24,665	25,209	25,905	24,699
Texas	533	616	564	84,300	88,023	86,789	84,833	88,639	87,353

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (concluded)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	February	March	April	February	March	April	February	March	April
Mountain									
Montana	93,989	98,851	92,761	692	682	642	94,681	99,533	93,403
Idaho	57,350	56,036	59,754	171	168	151	58,021	56,204	59,905
Wyoming	521	583	657	3,607	3,727	3,542	4,128	4,310	4,199
Colorado	15,535	14,340	16,094	21,602	23,967	21,600	37,137	38,307	37,694
New Mexico	64	63	68	1,428	1,538	1,108	1,492	1,601	1,176
Arizona	7,950	8,430	7,761	3,810	3,904	4,381	11,760	12,334	12,142
Utah	19,393	23,096	22,069	4,226	2,413	25	23,619	25,509	22,094
Nevada	3,554	4,627	4,995	75	74	62	3,629	4,701	5,057
Pacific									
Washington	120,539	122,226	110,235	6,458	4,285	4,236	126,997	126,511	114,471
Oregon	39,610	40,300	41,359	12,631	14,702	11,080	52,241	55,002	52,439
California	256,014	248,900	314,481	158,316	201,302	128,625	414,330	450,262	443,106

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during April are as follows: Alabama, 60,000; Arkansas, 318,000; Florida, 1,804,000; Georgia, 518,000; Louisiana, 152,000; Minnesota, 1,140,000; Mississippi, 286,000; Oregon, 9,758,000; South Carolina, 70,000; Washington, 1,156,000; Wisconsin, 295,000; and all other States (Arizona, California, Idaho, Maine, Michigan, Missouri, Montana, and New Mexico), 802,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS - thousands of cubic feet 1924		
	February	March	April	February	March	April	February	March	April
United States	3,326,631	3,241,009	2,936,727	1,543,594	1,540,256	1,208,735	2,605,180	3,193,033	2,834,058
New England	223,609	211,416	181,372	195,585	145,854	107,827	0	0	0
Middle Atlantic	1,004,300	990,617	928,096	23,411	22,595	22,381	40,742	41,716	37,301
East North Central	1,263,059	1,254,131	1,130,280	4,124	4,530	3,091	88,574	334,636	376,211
West North Central	347,201	318,368	273,187	159,372	148,364	131,566	185,653	242,461	258,242
South Atlantic	294,838	270,689	243,157	114,219	112,862	99,532	108,043	124,826	98,178
East South Central	92,962	91,133	83,419	17,657	16,436	16,348	12,181	15,806	12,016
West South Central	44,776	49,057	47,717	410,349	396,723	345,642	908,931	1,009,213	1,182,076
Mountain	52,986	53,603	47,727	24,597	23,734	24,088	10,856	18,227	18,304
Pacific	2,900	1,995	1,772	594,280	669,158	458,260	1,250,200	1,406,148	851,730
New England									
Maine	114	200	233	8,377	5,069	2,367	0	0	0
New Hampshire	3,675	2,375	1,768	353	0	20	0	0	0
Vermont	25	192	162	2,417	1,785	2,410	0	0	0
Massachusetts	138,570	132,099	114,064	41,933	40,044	34,068	0	0	0
Rhode Island	10,131	9,567	7,694	142,040	98,213	68,441	0	0	0
Connecticut	71,094	66,983	57,451	465	743	521	0	0	0
Middle Atlantic									
New York	422,583	417,334	382,613	22,398	21,462	21,370	12,574	11,665	8,651
New Jersey	114,600	113,535	102,789	564	613	526	0	0	0
Pennsylvania	467,117	459,748	442,694	449	520	485	28,168	30,051	28,650
East North Central									
Ohio	363,213	355,698	328,482	734	901	820	87,006	332,945	374,531
Indiana	182,692	184,013	166,502	669	641	706	1,568	1,691	1,680
Illinois	462,324	469,490	425,702	836	418	572	0	0	0
Michigan	175,173	165,649	148,472	1,399	2,360	706	0	0	0
Wisconsin	79,657	79,281	61,122	486	210	287	0	0	0
West North Central									
Minnesota	72,990	65,751	37,989	980	866	379	0	0	0
Iowa	81,911	81,307	70,376	2,223	1,682	1,694	0	0	0
Missouri	117,404	98,771	96,700	23,682	21,841	11,198	0	0	0
North Dakota	13,759	12,231	12,404	301	313	172	0	0	0
South Dakota	8,081	7,695	6,541	3,620	3,644	3,246	0	0	0
Nebraska	31,285	32,323	29,868	24,259	21,242	18,660	0	0	0
Kansas	21,771	20,290	19,309	104,307	98,776	96,217	185,653	242,461	258,242

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS - thousands of cubic feet 1924		
	February	March	April	February	March	April	February	March	April
United States	3,326,631	3,241,009	2,936,727	1,543,594	1,540,256	1,208,735	2,605,180	3,193,033	2,834,058
New England	223,609	211,416	191,372	195,585	145,854	107,827	0	0	0
Middle Atlantic	1,004,300	990,617	928,096	23,411	22,595	22,381	40,742	41,716	37,301
East North Central	1,263,059	1,254,131	1,130,280	4,124	4,530	3,091	88,574	334,636	376,211
West North Central	347,201	318,368	273,187	159,372	148,364	131,566	185,653	242,461	258,242
South Atlantic	294,838	270,689	243,157	114,219	112,862	99,532	108,043	124,826	98,178
East South Central	92,962	91,133	83,419	17,657	16,436	16,348	12,181	15,806	12,016
West South Central	44,776	49,057	47,717	420,349	396,723	345,642	908,931	1,009,213	1,182,076
Mountain	52,986	53,603	47,727	24,597	23,734	24,088	10,856	18,227	18,394
Pacific	2,900	1,995	1,772	594,280	669,158	458,260	1,250,200	1,406,148	851,730
New England									
Maine	114	200	233	8,377	5,069	2,367	0	0	0
New Hampshire	3,675	2,375	1,768	353	0	20	0	0	0
Vermont	25	192	162	2,417	1,785	2,410	0	0	0
Massachusetts	138,570	132,099	114,064	41,933	40,044	34,068	0	0	0
Rhode Island	10,131	9,557	7,694	142,040	98,213	68,441	0	0	0
Connecticut	71,094	66,983	57,451	465	743	521	0	0	0
Middle Atlantic									
New York	422,583	417,334	382,613	22,398	21,462	21,370	12,574	11,665	8,651
New Jersey	114,600	113,535	102,789	564	613	526	0	0	0
Pennsylvania	467,117	459,748	442,694	449	520	485	28,168	30,051	28,650
East North Central									
Ohio	363,213	355,698	328,482	734	901	820	87,006	332,945	374,531
Indiana	182,692	184,013	166,502	669	641	706	1,568	1,691	1,680
Illinois	462,324	469,490	425,702	836	418	572	0	0	0
Michigan	175,173	165,649	148,472	1,399	2,360	706	0	0	0
Wisconsin	79,657	79,281	61,122	486	210	287	0	0	0
West North Central									
Minnesota	72,990	65,751	37,989	980	866	379	0	0	0
Iowa	81,911	81,307	70,376	2,223	1,682	1,694	0	0	0
Missouri	117,404	98,771	96,700	23,682	21,841	11,198	0	0	0
North Dakota	13,759	12,231	12,404	301	313	172	0	0	0
South Dakota	8,081	7,695	6,541	3,620	3,644	3,246	0	0	0
Nebraska	31,285	32,323	29,868	24,259	21,242	18,660	0	0	0
Kansas	21,771	20,290	19,309	104,307	98,776	96,217	185,653	242,461	258,242

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluded)

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS - thousands of cubic feet 1924		
	February	March	April	February	March	April	February	March	April
South Atlantic									
Delaware	8,359	8,181	7,653	0	0	0	0	0	0
Maryland	35,000	27,971	25,732	132	134	133	0	0	0
District of Columbia	23,742	26,611	22,398	0	0	0	0	0	0
Virginia	40,708	38,195	34,363	55	12	196	0	0	0
West Virginia	144,461	146,531	131,818	0	0	0	108,043	124,783	98,178
North Carolina	25,403	9,009	8,154	270	270	270	0	0	0
South Carolina	9,117	6,103	5,550	180	168	196	0	0	0
Georgia	6,382	6,231	6,106	23,315	21,905	17,305	0	0	0
Florida	1,666	1,857	1,383	90,267	90,373	81,432			
East South Central									
Kentucky	48,627	48,623	43,183	569	576	553	12,181	15,806	12,016
Tennessee	24,316	25,167	24,196	219	229	220	0	0	0
Alabama	10,678	9,281	8,208	2,969	2,973	2,866	0	0	0
Mississippi	9,341	8,062	7,832	13,900	12,658	12,709			
West South Central									
Arkansas	9,552	9,990	9,580	19,418	16,671	17,092	157,832	167,204	143,242
Louisiana	6,540	6,545	5,550	62,220	61,173	57,631	104,765	134,909	131,028
Oklahoma	9,603	11,395	10,951	42,313	40,827	38,673	408,844	365,732	351,557
Texas	19,081	21,127	21,636	286,398	278,052	232,246	237,490	341,368	556,249
Mountain									
Montana	3,442	3,442	3,471	235	232	229	2,838	3,001	2,484
Idaho	0	0	0	0	0	0	0	0	0
Wyoming	7,678	8,281	7,965	6,491	5,112	4,901	8,018	15,226	15,820
Colorado	34,239	36,872	33,694	0	0	0	0	0	0
New Mexico	2,836	2,448	2,560	597	644	597	0	0	0
Arizona	0	0	0	16,957	17,519	18,153	0	0	0
Utah	4,741	2,560	37	0	0	0	0	0	0
Nevada	0	0	0	317	227	208	0	0	0
Pacific									
Washington	2,777	1,880	1,657	11,372	15,774	18,405	0	0	0
Oregon	123	115	115	6,016	2,263	2,238	0	0	0
California	0	0	0	476,892	651,121	437,617	1,250,200	1,406,148	851,730

AVERAGE DAILY CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES 1919 - 1924

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,600	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	105,000
April	88,100	97,200	80,600	81,900	96,900	97,900
May	85,300	91,100	77,900	79,700	95,100	
June	88,300	95,000	81,360	82,900	98,400	
July	85,700	94,800	79,400	82,700	98,000	
August	86,700	97,100	83,200	90,900	103,500	
September	92,200	100,100	86,300	96,600	105,600	
October	98,400	101,800	89,000	105,700	115,400	
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	40,300
May	23,300	29,800	27,500	27,600	32,600	
June	29,000	35,900	30,500	30,700	34,500	
July	32,100	38,400	33,200	32,600	37,900	
August	34,600	38,700	37,600	42,300	43,600	
September	37,100	40,700	39,700	45,400	44,200	
October	39,000	37,700	38,100	42,200	44,500	
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,800
March	57,000	50,800	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,500
May	62,100	68,400	64,300	71,400	88,400	
June	66,200	75,200	69,000	78,200	95,400	
July	66,400	83,700	62,400	84,100	102,300	
August	64,500	87,400	74,700	98,600	109,000	
September	63,400	90,500	78,900	104,200	106,600	
October	64,400	77,600	73,600	91,400	93,400	
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in April was 158,400,000 kilowatt-hours, about 1½ per cent less than the daily output for the month of March. The curve of average daily total output for 1924, shown on page 8, indicates that the production of electricity by public-utility power plants for the first four months of this year has been affected by about the normal seasonal decline in the demand for electricity which occurs every year during the spring and summer months. The curve showing the output by the use of water power shows the usual gradual increase in output due to the increase in the flow of streams which generally reaches the maximum in May or June.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January, 167,400,000 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March, 160,700,000 kilowatt-hours - 34.4 per cent; April, 158,400,000 kilowatt-hours - 38.9 per cent.

The curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. The total capacity of the generators in these plants is about 17,800,000 kilowatts. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

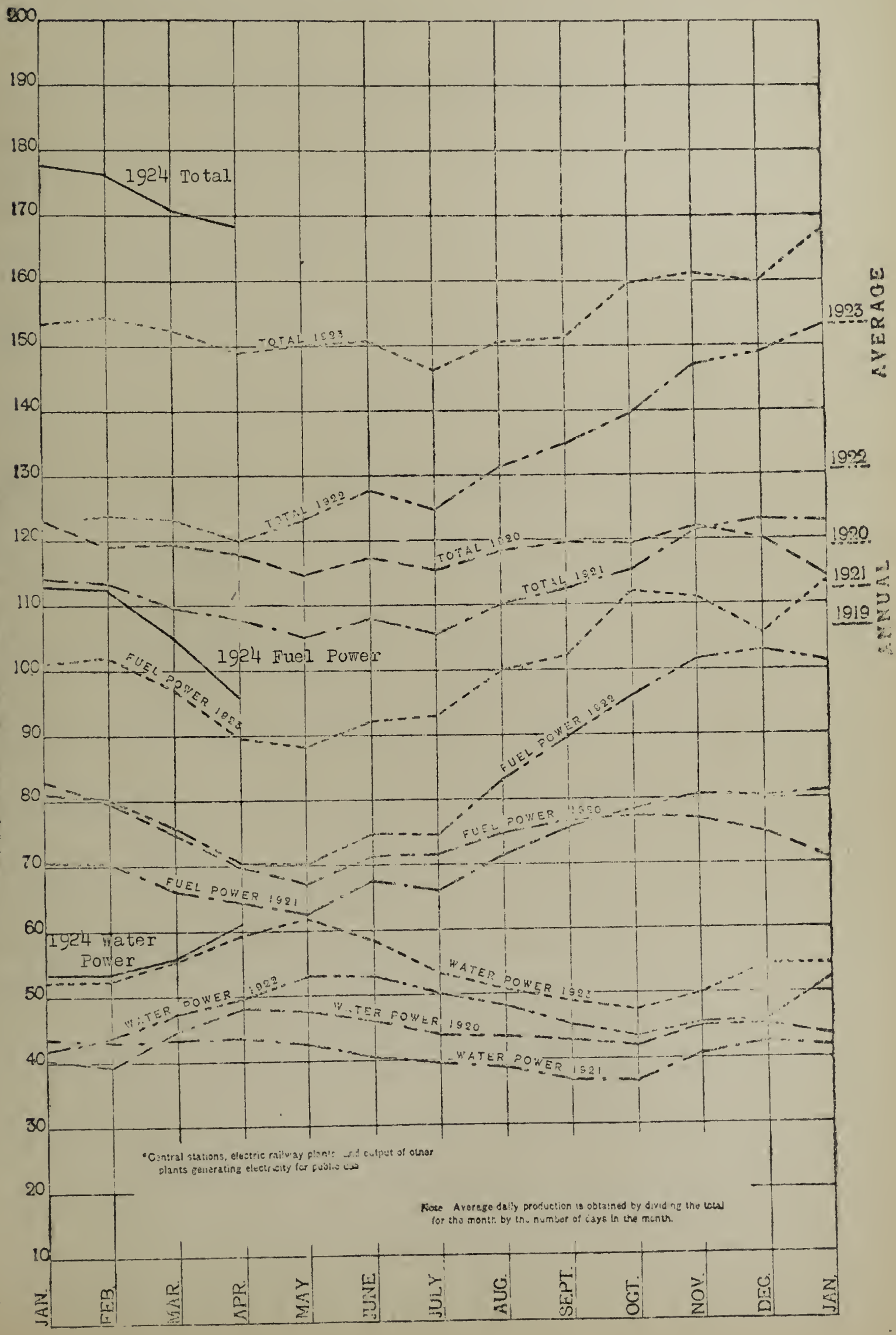
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924

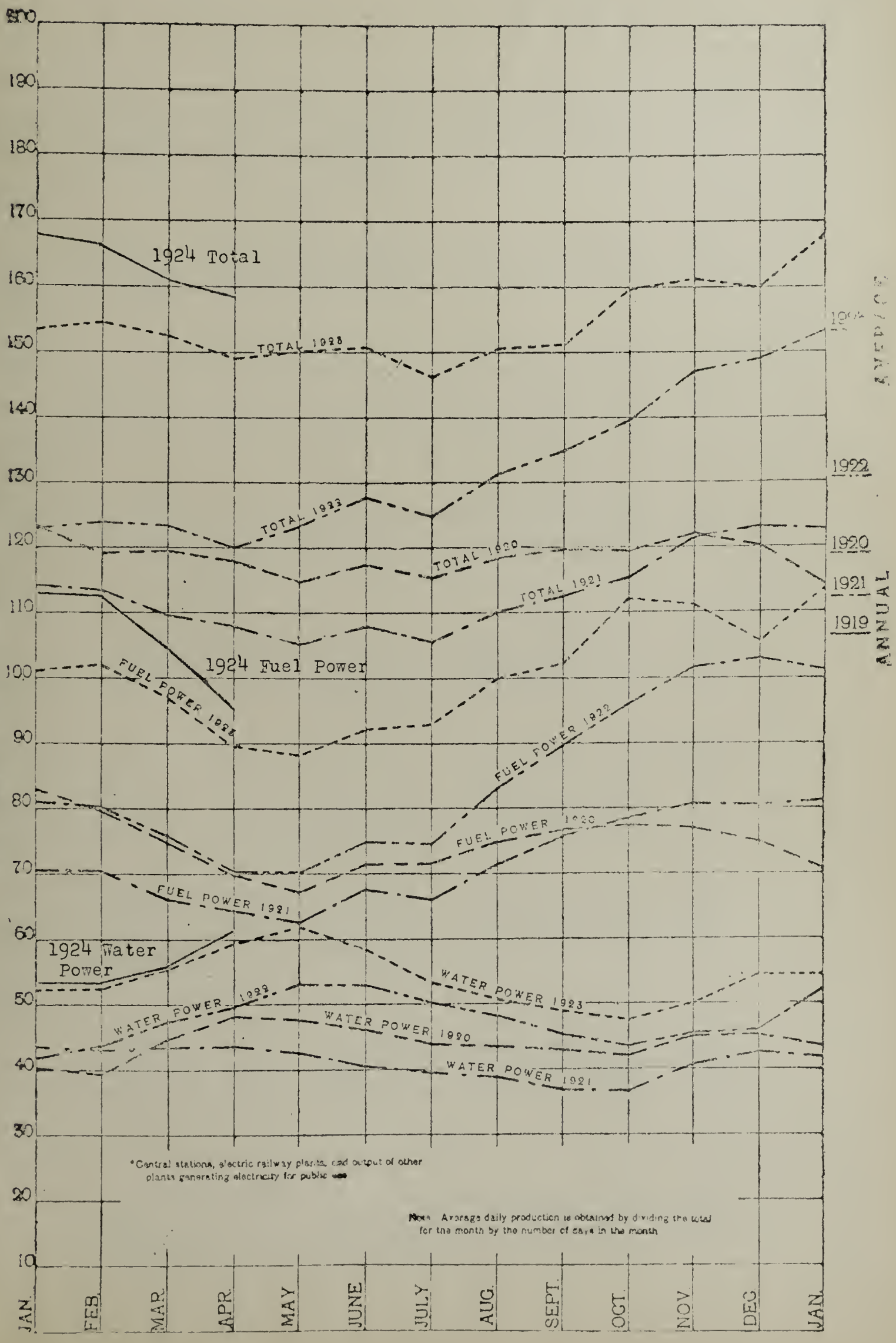


*Central stations, electric railway plants and output of other plants generating electricity for public use

Note Average daily production is obtained by dividing the total for the month by the number of days in the month.

Substitute this for last sheet of report issued June 3, 1924. See correction in curve for 1924 total.

AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS* IN THE UNITED STATES BY WATER POWER FUEL POWER AND BOTH WATER POWER AND FUEL POWER 1920 TO 1924,



*Central stations, electric railway plants, and output of other plants generating electricity for public use

Note - Average daily production is obtained by dividing the total for the month by the number of days in the month

05

THE LIBRARY OF THE JAN 1923 UNIVERSITY OF ILLINOIS

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

July 3, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR MARCH, APRIL, AND MAY, 1924.

Compiled by Division of Power Resources, Geological Survey.

THOUSAND OF KILOWATT-HOURS

Division and State	BY WATER POWER March	BY WATER POWER April	BY WATER POWER May	BY FUELS March	BY FUELS April	BY FUELS May	TOTAL March	TOTAL April	TOTAL May
United States	1,715,673	1,849,312	1,948,108	3,268,900	2,889,434	2,848,804	4,984,573	4,738,746	4,796,912
New England	126,717	140,702	144,356	243,377	205,408	188,359	370,094	346,110	332,715
Middle Atlantic	416,075	427,537	429,753	982,729	910,263	900,324	1,398,804	1,337,800	1,330,077
East North Central	136,651	185,957	191,004	1,050,314	948,736	921,000	1,186,965	1,134,693	1,112,004
West North Central	90,662	107,900	126,959	235,140	187,081	182,881	325,802	294,981	309,840
South Atlantic	217,083	210,594	199,216	290,742	262,241	262,317	507,825	472,835	461,533
East South Central	110,094	105,327	106,908	59,250	55,469	58,545	169,344	160,796	165,453
West South Central	938	874	745	150,649	145,583	148,734	151,587	146,457	149,479
Mountain	205,990	204,047	223,937	36,410	32,031	27,999	242,400	236,078	251,936
Pacific	411,463	466,374	525,230	220,289	142,622	158,645	631,752	608,996	683,875
New England									
Maine	40,585	38,547	37,137	790	487	427	41,375	39,034	37,564
New Hampshire	16,942	19,739	20,187	1,789	1,338	1,415	18,731	21,077	21,602
Vermont	13,826	13,155	16,967	232	293	81	14,058	13,448	17,048
Massachusetts	35,564	44,869	44,814	146,961	125,658	115,389	182,525	170,527	160,203
Rhode Island	847	967	946	34,855	29,593	25,596	35,702	30,560	26,542
Connecticut	18,953	23,425	24,305	58,750	48,039	45,451	77,703	71,464	69,756
Middle Atlantic									
New York	347,217	359,784	359,531	446,160	406,712	399,779	793,377	766,496	759,310
New Jersey	214	202	202	108,156	100,477	97,638	108,370	100,679	97,840
Pennsylvania	68,644	67,551	70,020	428,413	403,074	402,907	497,057	470,625	472,927
East North Central									
Ohio	3,980	3,519	4,158	317,733	296,531	285,276	321,713	300,050	289,434
Indiana	9,829	9,122	7,978	100,926	93,541	92,012	110,755	102,663	99,990
Illinois	17,631	17,018	17,836	382,275	352,453	351,518	399,906	369,471	369,354
Michigan	66,242	78,510	75,669	177,326	151,371	143,319	243,568	229,881	218,988
Wisconsin	38,969	77,788	85,363	72,054	54,840	48,845	111,023	132,628	134,238

PRODUCTION OF ELECTRICITY AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924 March	April	May	BY FUEL POWER 1924 March	April	May	TOTAL 1924 March	April	May
West North Central									
Minnesota	13,852	32,719	48,208	54,777	21,076	14,633	68,629	53,795	62,841
Iowa	66,317	63,924	67,022	38,405	34,563	35,736	104,722	98,487	102,758
Missouri	5,486	5,408	6,016	68,148	61,469	62,008	73,634	66,877	68,024
North Dakota	0	0	0	3,097	2,646	2,745	3,097	2,646	2,745
South Dakota	580	1,430	1,127	4,808	3,510	3,840	5,388	4,940	4,967
Nebraska	1,384	2,145	1,987	24,597	23,269	24,445	26,531	25,414	26,432
Kansas	2,443	2,274	2,599	41,308	40,548	39,474	43,751	42,822	42,073
South Atlantic									
Delaware	0	0	0	7,449	6,974	6,825	7,449	6,974	6,825
Maryland	295	338	338	30,747	27,315	25,699	31,042	27,653	26,037
District of Columbia	0	0	0	26,249	24,838	25,923	26,249	24,838	25,923
Virginia	27,872	28,289	24,647	35,373	31,445	35,172	63,245	59,734	59,819
West Virginia	2,643	2,320	2,025	157,906	141,285	137,633	160,549	143,605	139,658
North Carolina	41,744	36,651	36,445	4,393	4,264	4,229	46,137	40,915	40,674
South Carolina	86,692	86,470	77,876	3,388	3,148	2,758	90,080	89,618	80,634
Georgia	56,758	55,451	57,010	7,556	7,129	7,016	64,314	62,580	64,026
Florida	1,079	1,075	875	17,681	15,843	17,062	18,760	16,918	17,937
East South Central									
Kentucky	18	18	18	33,302	30,287	30,741	33,320	30,305	30,759
Tennessee	42,105	40,366	42,395	15,351	15,034	15,351	57,456	55,400	57,746
Alabama	67,971	64,934	64,495	5,235	4,872	7,209	73,206	69,815	71,704
Mississippi	0	0	0	5,362	5,276	5,244	5,362	5,276	5,244
West South Central									
Arkansas	277	276	242	11,744	10,124	9,978	12,021	10,400	10,220
Louisiana	0	0	0	25,021	23,549	23,815	25,021	23,549	23,815
Oklahoma	45	34	31	25,848	24,648	25,406	25,893	24,682	25,437
Texas	616	564	472	88,036	87,262	89,535	88,652	87,826	90,007

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Concluded)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	March	April	May	March	April	May	March	April	May
Mountain									
Montana	98,851	92,761	92,737	682	641	656	99,533	93,402	93,393
Idaho	56,036	59,754	67,080	168	151	161	56,204	59,905	67,241
Wyoming	583	565	557	3,727	3,700	3,673	4,310	4,265	4,230
Colorado	14,304	16,056	20,761	23,967	21,601	19,351	38,271	37,657	40,112
New Mexico	63	68	65	1,475	1,485	1,073	1,538	1,553	1,138
Arizona	8,430	7,761	12,084	3,904	4,381	3,060	12,334	12,142	15,144
Utah	23,096	22,088	25,954	2,413	25	0	25,509	22,113	25,954
Nevada	4,627	4,994	4,699	74	47	25	4,701	5,041	4,724
Pacific									
Washington	122,203	111,880	126,692	4,285	4,235	2,792	126,488	116,115	129,484
Oregon	40,300	40,045	37,891	14,702	10,959	12,501	55,002	51,004	50,392
California	248,960	314,449	360,647	201,302	127,428	143,352	450,262	441,877	503,999

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during May are as follows: Alabama, 54,000; Arkansas 237,000; Florida, 1,989,000; Georgia, 499,000; Louisiana, 152,000; Minnesota, 679,000; Mississippi, 616,000; Oregon, 12,421,000; South Carolina, 43,000; Washington, 985,000; Wisconsin, 315,000; and all other States (Arizona, California, Idaho, Maine, Michigan, Missouri, Montana, and New Mexico), 1,479,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS - thousand of cubic feet 1924		
	March	April	May	March	April	May	March	April	May
United States	3,236,677	2,900,864	2,834,266	1,542,274	1,215,111	1,166,315	3,193,506	2,836,624	3,003,735
New England	211,351	181,372	169,118	145,854	107,807	111,616	0	0	0
Middle Atlantic	989,667	918,209	907,597	22,595	22,348	21,921	41,716	37,301	38,775
East North Central	1,253,406	1,116,319	1,084,897	4,530	3,082	2,566	334,636	376,211	160,618
West North Central	316,663	265,057	256,276	150,205	133,611	135,493	242,461	258,240	251,969
South Atlantic	270,434	242,566	237,483	112,862	99,522	98,028	125,299	98,178	98,153
East South Central	90,501	83,097	85,655	16,420	20,477	20,568	15,806	12,016	13,034
West South Central	49,057	44,723	47,030	396,916	345,989	317,829	1,009,213	1,184,644	1,442,619
Mountain	53,603	47,749	44,555	23,734	24,042	20,491	18,227	18,304	18,659
Pacific	1,995	1,772	1,655	669,158	485,233	437,803	1,406,148	851,730	979,908
New England									
Maine	200	233	200	5,069	2,367	2,322	0	0	0
New Hampshire	2,310	1,768	1,932	0	00	0	0	0	0
Vermont	192	162	50	1,785	2,410	740	0	0	0
Massachusetts	132,099	114,064	105,350	40,044	34,068	30,919	0	0	0
Rhode Island	9,567	7,694	7,818	98,213	68,441	77,210	0	0	0
Connecticut	66,983	57,451	53,768	743	521	425	0	0	0
Middle Atlantic									
New York	416,384	381,251	379,468	21,462	21,370	20,878	11,665	8,651	9,015
New Jersey	113,535	102,929	99,212	613	493	630	0	0	0
Pennsylvania	459,748	434,029	428,917	520	485	413	30,051	28,650	29,760
East North Central									
Ohio	355,698	315,526	319,211	901	811	934	332,945	374,531	158,223
Indiana	183,838	166,851	162,482	641	706	600	1,691	1,680	2,395
Illinois	468,940	424,395	410,585	418	572	318	0	0	0
Michigan	165,549	148,424	137,874	2,360	706,	364	0	0	0
Wisconsin	79,281	61,123	54,745	210	287	350	0	0	0
West North Central									
Minnesota	65,745	37,937	30,063	866	571	463	0	0	0
Iowa	81,307	70,003	69,750	1,682	1,744	2,124	0	0	0
Missouri	98,771	89,764	90,913	21,841	12,262	12,226	0	0	0
North Dakota	12,356	12,394	11,384	313	172	276	0	0	0
South Dakota	7,695	6,541	6,776	3,644	3,246	3,268	0	0	0
Nebraska	30,482	29,109	29,363	23,083	19,578	20,283	0	0	0
Kansas	20,307	19,309	18,027	98,776	96,038	96,853	242,461	258,240	251,969

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluded)

Division and State	COAL-short tons 1924			FUEL OIL-barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	March	April	May	March	April	May	March	April	May
South Atlantic									
Delaware	8,181	7,653	7,409	0	0	0	0	0	0
Maryland	27,971	25,732	24,315	134	133	81	0	0	0
District of Columbia	26,611	22,398	22,674	0	0	0	0	0	0
Virginia	38,195	34,363	37,228	12	196	685	0	0	0
West Virginia	146,531	131,818	126,198	0	0	0	125,299	98,178	98,153
North Carolina	9,009	7,558	7,098	270	270	150	0	0	0
South Carolina	6,103	5,587	5,284	168	196	176	0	0	0
Georgia	6,231	6,112	5,931	21,905	17,305	17,262	0	0	0
Florida	1,602	1,345	1,346	90,373	81,422	79,674	0	0	0
East South Central									
Kentucky	48,623	43,493	43,554	560	534	295	15,806	12,016	13,034
Tennessee	25,167	24,076	24,522	229	220	238	0	0	0
Alabama	9,281	8,282	10,767	2,973	2,851	3,148	0	0	0
Mississippi	7,430	7,246	6,812	12,658	16,872	16,887	0	0	0
West South Central									
Arkansas	9,990	8,712	8,936	16,671	16,064	15,622	167,204	144,937	151,487
Louisiana	6,545	5,550	6,205	61,173	57,631	53,392	134,909	131,028	121,243
Oklahoma	11,395	9,868	11,365	40,914	39,534	39,083	365,732	352,430	387,354
Texas	21,127	20,593	20,524	278,158	232,760	209,732	341,368	556,249	782,535
Mountain									
Montana	3,442	3,471	3,529	232	229	231	3,001	2,484	2,401
Idaho	0	0	0	0	0	0	0	0	0
Wyoming	8,281	8,026	8,236	5,112	4,901	5,286	15,226	15,820	16,258
Colorado	36,872	33,689	30,376	0	0	0	0	0	0
New Mexico	2,448	2,526	2,414	644	598	661	0	0	0
Arizona	0	0	0	17,519	18,153	14,228	0	0	0
Utah	2,560	37	0	0	0	0	0	0	0
Nevada	0	0	0	227	161	85	0	0	0
Pacific									
Washington	1,880	1,657	1,537	15,774	18,405	12,783	0	0	0
Oregon	115	115	118	2,263	860	508	0	0	0
California	0	0	0	651,121	438,968	424,512	1,406,148	851,730	979,908

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1924

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,500	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	104,400
April	88,100	97,200	80,600	81,900	96,900	97,100
May	85,300	91,100	77,900	79,700	95,100	91,400
June	88,300	95,000	81,360	82,900	98,400	
July	85,700	94,800	79,400	82,700	98,000	
August	86,700	97,100	83,200	90,900	103,500	
September	92,200	100,100	86,300	96,600	105,600	
October	98,400	101,800	89,000	105,700	115,400	
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	40,500
May	23,300	29,800	27,500	27,600	32,600	37,600
June	29,000	35,900	30,500	30,700	34,500	
July	32,100	38,400	33,200	32,600	37,900	
August	34,600	38,700	37,600	42,300	43,600	
September	37,100	40,700	39,700	45,400	44,200	
October	39,000	37,700	38,100	42,200	44,500	
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,800
March	57,000	50,800	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,600
May	62,100	68,400	64,300	71,400	88,400	96,900
June	66,200	75,200	69,000	78,200	94,400	
July	66,400	83,700	62,400	84,100	102,300	
August	64,500	87,400	74,700	98,600	109,000	
September	63,400	90,500	78,900	104,200	106,600	
October	64,400	77,600	73,600	91,400	93,400	
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in May was 154,700,000 kilowatt-hours, about 2 per cent less than the daily output for the month of April. The curve of average daily total output for 1924, shown on page 8, indicates that the production of electricity by public-utility power plants for the first five months of this year has been affected by about the normal seasonal decline in the demand for electricity which occurs every year during the spring and summer months. The curve showing the output by the use of water power shows the usual gradual increase in output due to the increase in the flow of streams which generally reaches the maximum in May or June.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January 167,400 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March 160,800,000 kilowatt-hours- 34.4 per cent; April, 158,000,000 kilowatt-hours - 39.0 per cent; May 154,700,000 kilowatt-hours- 40.6 per cent.

The Curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A.H.Horton.

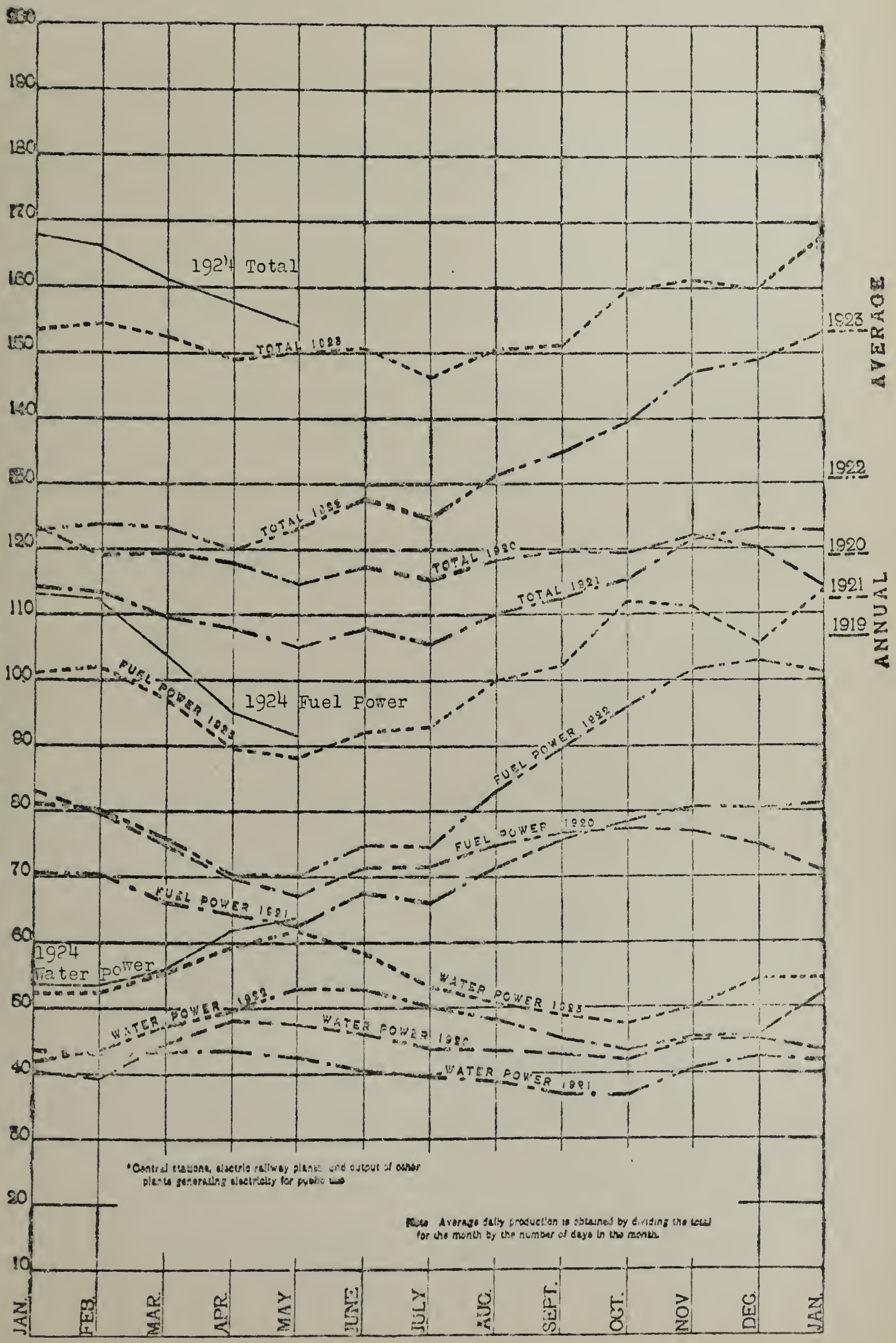
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924



*Central stations, electric railway plants, and output of other plants generating electricity for public use

Note Average daily production is obtained by dividing the total for the month by the number of days in the month.

705

LIBRARY OF THE GEOLOGICAL SURVEY JUL 21 1938 UNIVERSITY OF ILLINOIS

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

July 31, 1924.

2 Office of the Director

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR APRIL, MAY, AND JUNE, 1924.

Compiled by Division of Power Resources, Geological Survey

THOUSANDS OF KILOWATT-HOURS

	BY WATER POWER			BY FUELS			TOTAL		
Division and State	AApril	May	June	April	May	June	April	May	June
United States	1,857,161	1,953,753	1,765,211	2,882,293	2,839,091	2,813,877	4,739,454	4,792,844	4,579,088
New England	140,835	144,380	115,997	204,226	186,958	195,612	345,061	331,338	311,609
Middle Atlantic	427,537	429,672	396,586	910,048	895,735	853,878	1,337,585	1,325,407	1,250,464
East North Central	185,957	190,865	160,408	942,823	915,079	852,014	1,128,780	1,105,944	1,012,422
West North Central	107,900	126,959	118,973	187,075	182,972	189,634	294,975	309,931	308,607
South Atlantic	210,765	197,270	180,512	262,066	261,542	256,816	472,831	458,812	437,328
East South Central	105,327	106,908	100,667	55,469	58,702	58,856	160,796	165,610	159,523
West South Central	874	745	815	145,612	149,990	155,249	146,486	150,735	156,064
Mountain	204,047	224,086	220,817	32,031	28,632	28,857	236,078	252,718	249,674
Pacific	473,919	532,868	470,436	142,943	159,481	222,961	616,862	692,349	693,397
New England									
Maine	38,547	37,137	35,520	487	427	146	39,034	37,564	35,666
New Hampshire	19,739	20,187	12,490	1,338	1,413	2,969	21,077	21,600	15,459
Vermont	13,155	16,991	18,419	293	81	153	13,448	17,072	18,572
Massachusetts	45,002	44,814	32,430	124,476	113,990	112,671	169,478	158,804	145,101
Rhode Island	967	946	446	29,593	25,596	27,993	30,560	26,542	28,439
Connecticut	23,425	24,305	16,692	48,039	45,451	51,680	71,464	69,756	68,372
Middle Atlantic									
New York	359,784	359,450	330,547	406,678	399,628	390,349	766,462	759,078	720,896
New Jersey	202	202	159	100,477	97,636	93,784	100,679	97,838	93,943
Pennsylvania	67,551	70,020	65,880	402,893	398,471	369,745	470,444	468,491	435,625
East North Central									
Ohio	3,519	4,158	3,525	296,488	285,315	260,527	300,007	289,473	264,052
Indiana	9,122	7,978	8,048	93,541	91,331	88,069	102,663	99,309	96,117
Illinois	17,018	17,836	13,696	352,453	351,467	326,177	369,471	369,303	342,873
Michigan	78,510	75,517	64,590	145,501	138,091	132,688	224,011	213,608	197,278
Wisconsin	77,788	85,376	67,549	54,840	48,875	44,553	132,628	134,251	112,102

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)
THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	April	May	June	April	May	June	April	May	June
West North Central									
Minnesota	32,719	48,208	41,809	21,076	14,633	26,004	53,795	62,841	67,813
Iowa	63,924	67,022	63,294	34,563	35,731	35,706	98,487	102,753	99,000
Missouri	5,408	6,016	7,140	61,469	62,013	60,298	66,877	68,029	67,438
North Dakota	0	0	0	2,646	2,745	2,961	2,646	2,745	2,961
South Dakota	1,430	1,127	1,391	3,510	3,839	3,472	4,940	4,966	4,863
Nebraska	2,145	1,987	2,314	23,262	24,467	23,533	25,407	26,454	25,847
Kansas	2,274	2,599	3,025	40,549	39,544	37,660	42,823	42,143	40,685
South Atlantic									
Delaware	0	0	0	6,974	6,825	6,747	6,974	6,825	6,747
Maryland	338	338	339	27,315	25,699	24,448	27,653	26,037	24,787
District of Columbia	0	0	0	24,838	25,923	25,504	24,838	25,923	25,504
Virginia	28,460	24,647	20,707	31,382	35,172	37,388	59,842	59,819	58,095
West Virginia	2,320	2,025	2,341	141,173	137,633	130,938	143,493	139,658	133,279
North Carolina	36,651	36,775	33,684	4,264	4,160	4,405	40,915	40,935	38,089
South Carolina	86,470	77,876	72,883	3,148	2,758	3,075	89,618	80,634	75,958
Georgia	55,451	54,734	49,863	7,129	6,310	6,755	62,580	61,044	56,618
Florida	1,075	875	695	15,843	17,062	17,556	16,918	17,937	18,251
East South Central									
Kentucky	18	18	18	30,287	30,771	29,856	30,305	30,789	29,874
Tennessee	40,366	42,395	39,882	15,034	15,351	15,200	55,400	57,746	55,082
Alabama	64,943	64,495	60,767	4,872	7,209	7,974	69,815	71,704	68,741
Mississippi	0	0	0	5,276	5,371	5,826	5,276	5,371	5,826
West South Central									
Arkansas	276	242	241	10,124	10,057	12,165	10,400	10,299	12,406
Louisiana	0	0	0	23,549	23,811	23,581	23,549	23,811	23,581
Oklahoma	34	31	39	24,672	26,054	25,984	24,706	26,085	26,023
Texas	564	472	535	87,267	90,068	93,519	87,831	90,540	94,054

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Concluded)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	April	May	June	April	May	June	April	May	June
Mountain									
Montana	92,761	92,733	90,659	641	639	607	93,402	93,372	91,266
Idaho	59,754	67,080	70,636	151	161	155	59,905	67,241	70,791
Wyoming	565	547	528	3,700	3,673	3,632	4,265	4,220	4,160
Colorado	16,056	20,761	19,492	21,601	19,357	19,049	37,657	40,118	38,541
New Mexico	68	65	65	1,485	1,629	1,626	1,553	1,694	1,691
Arizona	7,761	12,084	13,056	4,381	3,148	3,751	12,142	15,232	16,807
Utah	22,088	26,117	21,687	25	0	0	22,113	26,117	21,687
Nevada	4,994	4,699	4,694	47	25	37	5,041	4,724	4,731
Pacific									
Washington	111,880	126,642	115,757	4,235	2,792	3,755	116,115	129,434	119,512
Oregon	40,045	37,891	32,447	11,006	12,582	16,578	51,051	50,473	49,025
California	321,994	368,335	322,232	127,702	144,107	202,628	449,696	512,442	524,860

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during June are as follows: Alabama, 54,000; Arkansas 238,000; Florida, 1,986,000; Georgia, 492,000; Louisiana, 92,000; Minnesota, 569,000; Mississippi, 638,000; Oregon, 16,518,000; South Carolina, 65,000; Washington, 1,145,000; Wisconsin, 352,000; and all other States (Arizona, Idaho, Maine, Michigan, California, Missouri, Montana, and New Mexico), 1,232,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons 1924			FUEL OIL - Barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	April	May	June	April	May	June	April	May	June
United States	2,891,283	2,816,352	2,701,106	1,234,049	1,207,473	1,306,140	2,820,484	3,017,840	3,731,168
New England	180,189	168,346	172,023	125,158	110,558	103,844	0	0	0
Middle Atlantic	918,074	902,610	857,656	22,348	21,552	20,807	37,301	40,330	36,025
East North Central	1,108,398	1,075,547	1,000,954	3,082	2,566	2,417	356,017	160,618	177,884
West North Central	265,037	256,684	264,150	133,605	134,365	94,320	258,240	253,469	317,401
South Atlantic	242,294	236,569	232,174	99,522	98,163	100,008	98,178	98,153	85,647
East South Central	83,097	85,506	83,284	20,477	19,775	20,218	12,016	13,034	11,473
West South Central	44,673	44,671	44,638	347,582	318,309	349,285	1,187,409	1,453,669	1,444,077
Mountain	47,749	44,764	44,887	24,042	20,716	19,613	18,304	18,659	17,213
Pacific	1,772	1,655	1,340	458,233	481,469	595,628	853,019	979,908	1,641,448
New England									
Maine	233	200	217	2,367	2,322	442	0	0	0
New Hampshire	1,768	1,917	3,601	0	0	0	0	0	0
Vermont	162	61	167	2,410	740	1,433	0	0	0
Massachusetts	112,881	104,582	101,742	33,728	29,861	28,289	0	0	0
Rhode Island	7,694	7,818	9,570	86,132	77,210	73,497	0	0	0
Connecticut	57,451	53,768	56,726	521	425	183	0	0	0
Middle Atlantic									
New York	381,116	375,285	363,376	21,370	20,509	19,741	8,651	10,570	7,797
New Jersey	102,929	99,214	95,166	493	630	638	0	0	0
Pennsylvania	434,029	428,111	399,114	485	413	428	28,650	29,760	28,228
East North Central									
Ohio	316,658	319,340	292,715	811	934	775	354,337	158,223	176,548
Indiana	166,767	160,987	151,458	706	600	566	1,680	2,395	1,336
Illinois	424,395	410,438	385,144	572	318	347	0	0	0
Michigan	139,454	130,033	124,326	706	364	414	0	0	0
Wisconsin	61,124	54,749	47,311	287	350	315	0	0	0
West North Central									
Minnesota	37,937	30,058	36,945	571	463	607	0	0	0
Iowa	70,003	69,781	69,637	1,744	2,124	2,162	0	0	0
Missouri	89,764	90,913	86,494	12,262	12,248	10,838	0	0	0
North Dakota	12,394	11,384	10,538	172	276	172	0	0	0
South Dakota	6,541	6,776	6,338	3,246	3,266	3,000	0	0	0
Nebraska	29,089	29,745	30,872	19,578	20,283	11,850	0	0	0
Kansas	19,309	18,827	23,326	96,032	95,705	65,691	258,240	253,469	317,401

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluddd)

Division and State	COAL-short tons 1924			FUEL OIL-barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	April	May	June	April	May	June	April	May	June
South Atlantic									
Delaware	7,653	7,409	7,329	0	0	0	0	0	0
Maryland	25,732	24,315	23,892	133	81	81	0	0	0
District of Columbia	22,398	22,674	22,532	0	0	0	0	0	0
Virginia	34,322	37,198	37,952	196	685	643	0	0	0
West Virginia	131,587	126,198	120,548	0	0	0	98,178	98,153	85,647
North Carolina	7,558	7,044	7,306	270	160	150	0	0	0
South Carolina	5,587	5,284	5,698	196	176	243	0	0	0
Georgia	6,112	5,101	5,520	17,305	17,387	18,948	0	0	0
Florida	1,345	1,346	1,397	81,422	79,674	79,943	0	0	0
East South Central									
Kentucky	43,493	43,554	41,674	534	279	510	12,016	13,034	11,473
Tennessee	24,076	24,522	24,025	220	238	237	0	0	0
Alabama	8,282	10,767	11,105	2,851	3,148	2,782	0	0	0
Mississippi	7,246	6,663	6,480	16,872	16,110	16,689	0	0	0
West South Central									
Arkansas	8,712	8,936	8,498	16,064	15,804	24,153	144,937	151,487	151,564
Louisiana	5,550	6,205	5,829	57,631	53,387	54,680	131,028	121,243	139,465
Oklahoma	9,868	9,116	9,999	41,187	39,195	37,421	355,195	400,204	405,586
Texas	20,543	20,414	20,312	232,700	209,923	233,031	556,249.	780,735	747,462
Mountain									
Montana	3,471	3,717	3,502	229	71	66	2,484	2,401	2,505
Idaho	0	0	0	0	0	0	0	0	0
Wyoming	8,026	8,236	8,714	4,901	5,286	3,620	15,820	16,258	14,708
Colorado	33,689	30,397	30,280	0	0	0	0	0	0
New Mexico	2,526	2,414	2,391	598	661	667	0	0	0
Arizona	0	0	0	18,153	14,613	15,080	0	0	0
Utah	37	0	0	0	0	0	0	0	0
Nevada	0	0	0	161	85	180	0	0	0
Pacific									
Washington	1,657	1,537	1,226	18,405	12,783	16,332	0	0	0
Oregon	115	118	114	860	508	393	0	0	0
California	0	0	0	438,968	468,178	578,903	853,019	979,908	1,641,448

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1924

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,600	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	104,400
April	88,100	97,200	80,600	81,900	96,900	96,400
May	85,300	91,100	77,900	79,700	95,100	90,800
June	88,300	95,000	81,360	82,900	98,400	90,000
July	85,700	94,800	79,400	82,700	98,000	
August	86,700	97,100	83,200	90,900	103,500	
September	92,200	100,100	86,300	96,600	105,600	
October	98,400	101,800	89,000	105,700	115,400	
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	41,100
May	23,300	29,800	27,500	27,600	32,600	39,000
June	29,000	35,900	30,500	30,700	34,500	43,500
July	32,100	38,400	33,200	32,600	37,900	
August	34,600	38,700	37,600	42,300	43,600	
September	37,100	40,700	39,700	45,400	44,200	
October	39,000	37,700	38,100	42,200	44,500	
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,800
March	57,000	50,800	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,000
May	62,100	68,400	64,300	71,400	88,400	97,300
June	66,200	75,200	69,000	78,200	94,400	124,400
July	66,400	83,700	62,400	84,100	102,300	
August	64,500	87,400	74,700	98,600	109,000	
September	63,400	90,500	78,900	104,200	106,600	
October	64,400	77,600	73,600	91,400	93,400	
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in June was 152,600,000 kilowatt-hours, about 1 per cent less than the daily output for the month of May. The curve of average daily total output for 1924 shown on page 8 indicates that the production of electricity by public-utility power plants for the first half of the year has steadily decreased since January. The average rate of output for May and June clearly indicates that there has been more than the usual seasonal decline in demand for electricity during these two months. The output for June of this year was only a little more than 1 per cent greater than the output for the corresponding month in 1923. No indication of the trend for the remaining half of the year will probably be available until the output for August has been determined, as the outputfor July, judging from records of previous years, is subject to a peculiar decrease for which there is no apparent explanation. This peculiarity in the July figures of output renders them of little or no value in indicating the trend of demand for electricity. The curve of average daily output by the use of water power shows that the output of electricity by the use of water power reached a maximum for the year in May.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January, 167,400,000 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March 160,800,000 kilowatt-hours - 34.4 per cent; April, 158,100,000 kilowatt - hours - 39.2 per cent; May, 154,600,000 kilowatt-hours - 40.8 per cent; June, 152,600,000 kilowatt-hours - 38.5 per cent

The curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

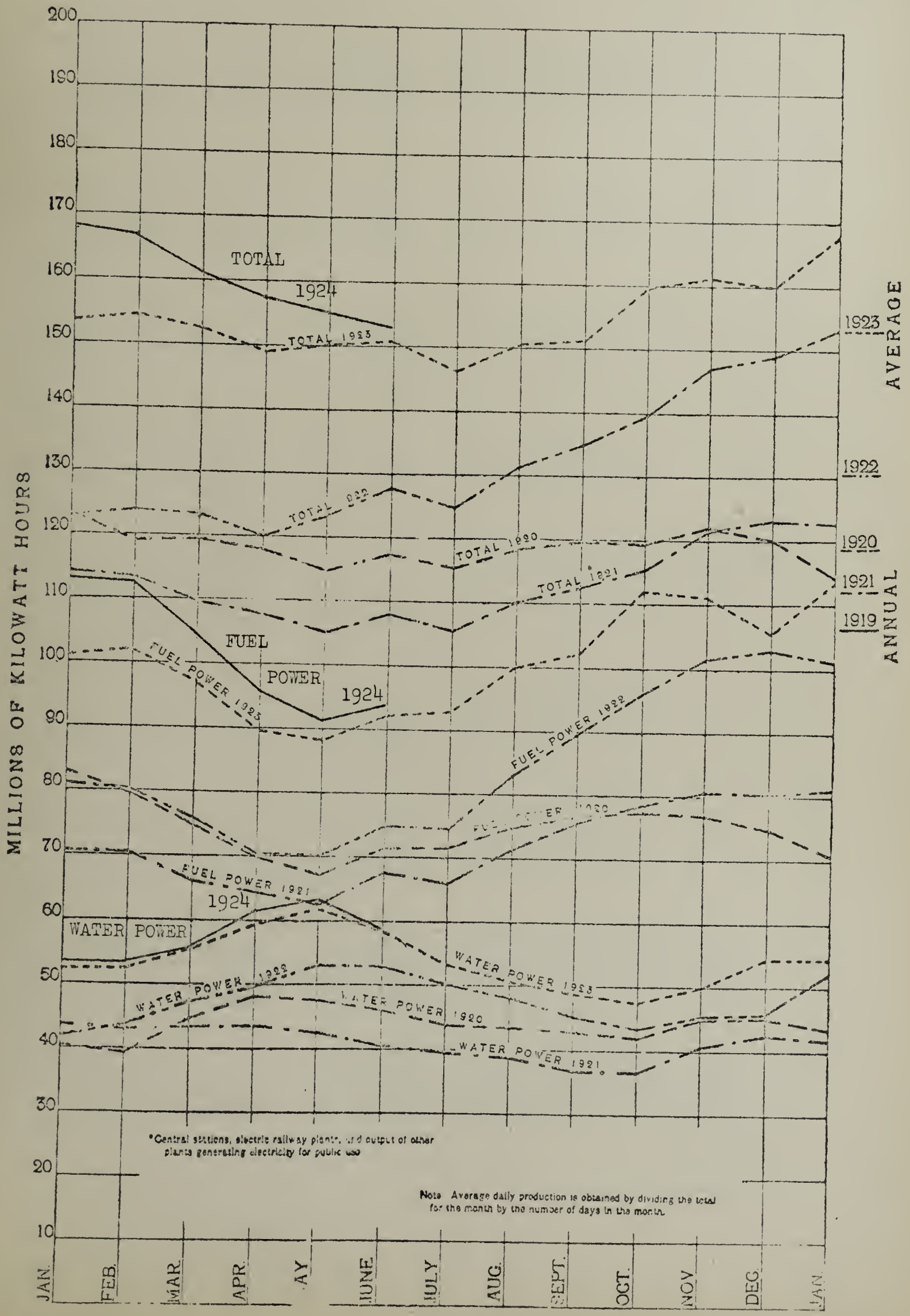
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924



*Central stations, electric railway plants, and output of other plants generating electricity for public use

Note Average daily production is obtained by dividing the total for the month by the number of days in the month.

05

17677

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

September 4, 1924

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR MAY, JUNE, AND JULY, 1924.

Compiled by Division of Power Resources, Geological Survey

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER			BY FUELS			TOTAL		
	May	June	July	May	June	July	May	June	July
United States	1,950,315	1,705,277	1,614,850	2,843,554	2,847,326	2,983,691	4,793,869	4,552,603	4,598,541
New England	149,490	112,882	100,468	186,958	194,784	211,962	331,448	307,666	312,430
Middle Atlantic	426,095	392,066	369,630	901,792	857,793	888,107	1,327,887	1,249,859	1,257,737
East North Central	190,867	161,122	148,093	915,079	857,381	871,839	1,105,946	1,018,503	1,019,932
West North Central	126,959	119,096	116,303	182,982	189,594	204,475	309,941	308,690	320,778
South Atlantic	197,205	180,049	179,319	259,840	254,755	258,433	458,571	436,329	437,752
East South Central	106,908	100,670	93,997	58,770	58,877	66,689	165,678	159,547	160,686
West South Central	745	833	924	150,015	152,532	160,546	150,760	153,365	161,470
Mountain	224,171	221,056	222,679	28,637	28,836	33,239	252,808	249,892	255,918
Pacific	532,875	417,503	383,437	159,481	252,774	288,401	692,356	670,277	671,838
New England									
Maine	37,137	35,603	32,168	427	146	980	37,564	35,749	33,148
New Hampshire	20,187	12,483	10,645	1,413	2,969	4,066	21,600	15,452	14,711
Vermont	16,991	18,421	22,065	81	153	361	17,072	18,574	22,426
Massachusetts	44,924	32,439	30,616	113,990	111,857	119,302	158,914	144,287	149,918
Rhode Island	946	446	241	25,596	27,993	27,024	26,542	28,439	27,265
Connecticut	24,305	13,499	4,733	45,451	51,666	60,229	69,756	65,165	64,962
Middle Atlantic									
New York	355,673	326,027	306,696	399,631	390,686	420,300	755,504	716,703	726,996
New Jersey	202	159	115	97,636	93,783	98,203	97,838	93,942	98,318
Pennsylvania	70,020	65,880	62,819	404,525	373,324	369,604	474,545	439,204	432,423
East North Central									
Ohio	4,158	4,205	3,311	285,315	265,338	269,659	289,473	269,543	272,970
Indiana	7,978	8,048	6,833	91,331	87,889	85,682	99,309	95,937	92,515
Illinois	17,836	16,696	17,949	351,467	326,895	327,404	369,303	343,591	345,353
Michigan	75,519	64,596	64,138	138,091	132,696	139,067	213,610	197,292	203,205
Wisconsin	85,376	67,577	55,862	48,875	44,563	50,027	134,251	112,140	105,889

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924 May	June	July	BY FUELS 1924 May	June	July	TOTAL 1924 May	June	July
West North Central									
Minnesota	48,208	41,808	42,379	14,633	25,979	36,087	62,841	67,787	78,466
Iowa	67,022	63,561	61,669	35,731	35,681	36,553	102,753	99,242	98,222
Missouri	6,016	7,140	5,688	62,013	60,249	61,053	68,029	67,389	66,741
North Dakota	0	0	0	2,745	2,938	3,175	2,745	2,938	3,175
South Dakota	1,127	1,391	1,583	3,839	3,465	3,634	4,966	4,856	5,217
Nebraska	1,987	2,171	2,455	24,467	23,611	25,283	26,454	25,782	27,738
Kansas	2,599	3,025	2,529	39,554	37,671	38,690	42,153	40,696	41,219
South Atlantic									
Delaware	0	0	0	6,825	6,747	6,837	6,825	6,747	6,837
Maryland	338	337	301	25,699	24,448	28,750	26,037	24,785	29,051
District of Columbia	0	0	0	25,923	25,504	23,675	25,923	25,504	23,675
Virginia	24,582	20,767	20,828	35,079	37,388	38,251	59,661	58,155	59,079
West Virginia	2,025	2,341	2,259	137,550	130,938	131,274	139,575	133,279	133,533
North Carolina	36,775	33,638	34,104	4,160	4,405	4,377	40,935	38,093	38,481
South Carolina	77,876	72,877	71,764	2,758	3,075	2,962	80,634	75,952	74,726
Georgia	54,734	49,344	49,019	6,310	6,227	6,895	61,044	55,571	55,914
Florida	875	695	1,044	15,536	16,023	15,412	16,411	16,718	16,456
East South Central									
Kentucky	18	18	14	30,754	29,848	31,581	30,772	29,866	31,595
Tennessee	42,395	39,888	41,481	15,436	15,284	14,604	57,831	55,172	56,085
Alabama	64,495	60,764	52,502	7,209	7,974	14,517	71,704	68,738	67,019
Mississippi	0	0	0	5,371	5,771	5,987	5,371	5,771	5,987
West South Central									
Arkansas	242	259	260	10,057	12,468	13,987	10,299	12,727	14,247
Louisana	0	0	0	23,811	23,648	24,737	23,811	23,648	24,737
Oklahoma	31	39	48	26,054	26,094	26,505	26,085	26,133	26,553
Texas	472	535	616	90,093	90,322	95,317	90,565	90,857	95,933

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Concluded)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	May	June	July	May	June	July	May	June	July
Mountain									
Montana	92,733	90,654	93,280	639	607	678	93,372	91,261	93,958
Idaho	67,080	70,636	75,217	161	136	158	67,241	70,772	75,375
Wyoming	547	528	507	3,673	3,632	3,727	4,220	4,160	4,234
Colorado	20,761	19,494	20,411	19,357	19,049	19,681	40,118	38,543	40,092
New Mexico	65	65	70	1,634	1,624	1,576	1,699	1,689	1,646
Arizona	12,084	13,056	12,991	3,148	3,751	3,505	15,232	16,807	16,496
Utah	26,202	21,914	16,966	0	0	3,832	26,202	21,914	20,798
Nevada	4,699	4,709	3,237	25	37	82	4,724	4,746	3,319
Pacific									
Washington	126,642	115,675	118,058	2,792	3,764	3,616	129,434	119,439	121,674
Oregon	37,898	34,587	28,956	12,582	16,578	24,972	50,480	51,165	53,928
California	368,335	267,241	236,423	144,107	232,432	259,813	512,442	499,673	496,236

Kilovatt-hours of electricity produced by plants utilizing wood for fuel during July are as follows: Alabama, 57,000; Florida, 482,000; Georgia, 340,000; Louisana, 91,000; Minnesota, 822,000; Mississippi, 315,000; Oregon, 24,757,000; South Carolina, 28,000; Washington, 1,260,000; Wisconsin, 304,000; and all other states (Arizona, Arkansas, California, Idaho, Maine, Michigan, Montana, New Mexico, and Virginia), 1,925,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons, 1924			FUEL OIL - barrels, 1924			NATURAL GAS - thousands of cubic feet, 1924		
	May	June	July	May	June	July	May	June	July
United States	2,820,908	2,691,891	2,778,293	1,209,226	1,341,426	1,391,126	3,017,840	4,284,755	5,037,693
New England	168,346	171,662	185,246	110,558	99,215	96,306	0	0	0
Middle Atlantic	907,297	855,163	888,550	21,567	20,892	23,672	40,330	36,025	28,993
East North Central	1,075,547	998,456	1,009,794	2,566	2,417	2,604	160,618	178,654	131,848
West North Central	256,823	261,162	268,649	134,438	97,292	102,837	253,469	308,423	345,819
South Atlantic	236,236	231,774	239,979	98,163	99,577	99,364	98,153	85,647	90,742
East South Central	85,506	83,249	88,813	19,744	20,057	20,077	13,034	13,548	6,163
West South Central	44,734	44,115	45,733	320,020	337,535	358,013	1,453,669	1,495,649	1,582,822
Mountain	44,764	44,970	50,137	20,701	19,613	20,378	18,659	17,213	16,404
Pacific	1,655	1,340	1,392	481,469	644,828	667,875	979,908	2,149,596	2,834,902
New England									
Maine	200	217	174	2,322	442	4,472	0	0	0
New Hampshire	1,917	3,601	4,450	0	0	0	0	0	0
Vermont	61	167	121	740	1,433	2,525	0	0	0
Massachusetts	104,582	101,456	108,251	29,861	23,660	25,411	0	0	0
Rhode Island	7,818	9,570	11,263	77,210	73,497	63,710	0	0	0
Connecticut	53,768	56,651	60,987	425	183	188			
Middle Atlantic									
New York	375,285	363,724	395,055	20,524	19,827	22,574	10,570	7,797	3,785
New Jersey	99,214	95,166	100,277	630	637	690	0	0	0
Pennsylvania	432,798	396,273	393,218	413	428	408	29,760	28,228	25,208
East North Central									
Ohio	319,340	290,106	294,574	934	775	767	158,223	177,318	130,248
Indiana	169,987	151,825	146,826	600	566	610	2,395	1,336	1,600
Illinois	410,438	384,856	388,230	318	347	256	0	0	0
Michigan	130,033	124,358	129,728	364	414	707	0	0	0
Wisconsin	54,749	47,311	50,436	350	315	264	0	0	0
West North Central									
Minnesota	30,058	36,764	44,056	463	607	682	0	0	0
Iowa	69,920	69,651	70,070	2,124	2,162	2,330	0	0	0
Missouri	90,913	86,957	84,276	12,248	11,102	12,343	0	0	0
North Dakota	11,384	10,383	11,527	276	270	256	0	0	0
South Dakota	6,776	6,338	6,040	3,266	3,000	3,182	0	0	0
Nebraska	29,745	31,138	34,458	20,283	11,870	10,045	253,469	308,423	345,819
Kansas	18,027	19,931	18,222	95,778	68,281	73,999			

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluded)

Division and State	Coal-short tons 1924			FUEL OIL-barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	May	June	July	May	June	July	May	June	July
South Atlantic									
Delaware	7,409	7,329	7,449	0	0	0	0	0	0
Maryland	24,315	23,892	27,128	81	81	79	0	0	0
District of Columbia	22,674	22,532	23,357	0	0	0	0	0	0
Virginia	37,025	37,952	38,530	685	643	464	0	0	0
West Virginia	126,063	120,548	123,541	0	0	0	98,153	85,647	90,742
North Carolina	7,044	7,306	7,248	160	150	150	0	0	0
South Carolina	5,259	5,673	5,667	176	243	224	0	0	0
Georgia	5,101	5,145	5,544	17,387	18,948	19,478	0	0	0
Florida	1,346	1,397	1,515	79,674	79,512	78,969	0	0	0
East South Central									
Kentucky	43,554	41,639	42,364	248	479	349	13,034	13,548	6,163
Tennessee	24,522	24,025	22,401	238	237	235	0	0	0
Alabama	10,767	11,105	17,157	3,148	2,782	2,800	0	0	0
Mississippi	6,663	6,480	6,891	16,110	16,559	16,693	0	0	0
West South Central									
Arkansas	8,999	8,663	9,320	15,804	24,594	28,965	151,487	164,240	178,303
Louisiana	6,205	5,829	7,494	53,387	54,805	52,489	121,243	139,465	148,960
Oklahoma	9,116	10,218	9,063	40,735	41,219	44,049	400,204	399,790	402,141
Texas	20,414	19,405	19,856	210,094	216,917	232,510	780,735	792,154	853,418
Mountain									
Montana	3,717	3,622	3,817	71	66	69	2,401	2,505	2,165
Idaho	0	0	0	0	0	0	0	0	0
Wyoming	8,236	8,714	8,804	5,286	3,620	4,066	16,258	14,708	14,239
Colorado	30,397	30,280	31,129	0	0	0	0	0	0
New Mexico	2,414	2,354	2,249	646	667	697	0	0	0
Arizona	0	0	0	14,613	15,080	15,198	0	0	0
Utah	0	0	4,138	0	0	0	0	0	0
Nevada	0	0	0	85	180	348	0	0	0
Pacific									
Washington	1,537	1,226	1,392	12,783	16,332	15,031	0	0	0
Oregon	118	114	0	508	393	16,093	0	0	0
California	0	0	0	468,178	628,103	636,751	979,908	2,149,596	2,834,902

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1924

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,600	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	104,400
April	88,100	97,200	80,600	81,900	96,900	96,400
May	85,300	91,100	77,900	79,700	95,100	91,000
June	88,300	95,000	81,360	82,900	98,400	89,700
July	85,700	94,800	79,400	82,700	98,000	89,600
August	86,700	97,100	83,200	90,900	103,500	
September	92,200	100,100	86,300	96,600	105,600	
October	98,400	101,800	89,000	105,700	115,400	
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	41,100
May	23,300	29,800	27,500	27,600	32,600	39,000
June	29,000	35,900	30,500	30,700	34,500	44,700
July	32,100	38,400	33,200	32,600	37,900	44,900
August	34,600	38,700	37,600	42,300	43,600	
September	37,100	40,700	39,700	45,400	44,200	
October	39,000	37,700	38,100	42,200	44,500	
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,800
March	57,000	50,800	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,000
May	62,100	68,400	64,300	71,400	88,400	97,300
June	66,200	75,200	69,000	78,200	94,400	142,800
July	66,400	83,700	62,400	84,100	102,300	162,500
August	64,500	87,400	74,700	98,600	109,000	
September	63,400	90,500	78,900	104,200	106,600	
October	64,400	77,600	73,600	91,400	93,400	
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in July was 148,300,000 kilowatt-hours, about 2 per cent less than the revised figures for the daily output of the month of June. The curve of average daily total output for 1924 shown on page 8 indicates that the average daily output of electricity by public-utility power plants has decreased uniformly each month from April to July Since there was no increase in the rate of decrease in July, it probably can be stated, based on previous records, that the rate of decrease in the demand for electricity which has continued so uniformly so far this year probably reached a minimum in July and that the figures of output for August will probably show an increase.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January, 167,400,000 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March, 160,800,000 kilowatt-hours - 34.4 per cent; April, 158,000,000 kilowatt-hours - 39.2 per cent; May, 154,600,000 kilowatt-hours - 40.7 per cent; June, 151,800,000 kilowatt-hours - 37.5 per cent; July, 148,300,000 kilowatt-hours - 35.1 per cent.

The curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The revision of the June output figures for California is due to estimating that the output of one company for which reports had not been received was the same in June as it was in May.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

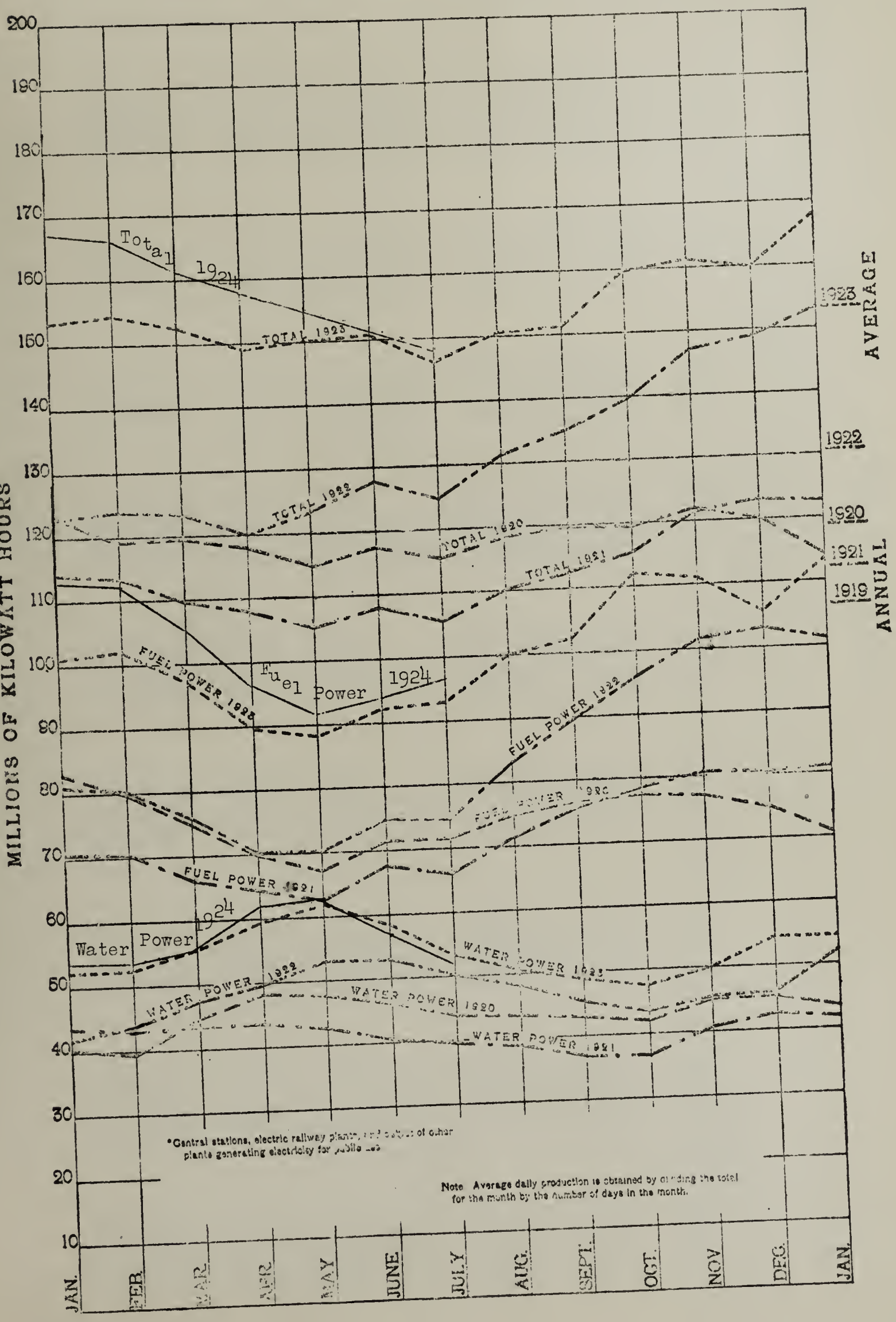
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924



*Central stations, electric railway plants, and output of other plants generating electricity for public use

Note Average daily production is obtained by dividing the total for the month by the number of days in the month.

388.705
N
17733.
-p 2

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

October 3, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR JUNE, JULY, AND AUGUST, 1924

Compiled by Division of Power Resources, Geological Survey

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER			BY FUELS			TOTAL		
	June	July	August	June	July	August	June	July	August
United States	1,705,833	1,602,601	1,519,743	2,848,062	3,008,038	3,214,410	4,553,895	4,610,639	4,734,153
New England	112,882	100,078	98,159	194,784	210,884	235,777	307,666	310,962	333,936
Middle Atlantic	392,602	370,660	350,976	857,793	889,075	925,977	1,250,395	1,259,735	1,276,953
East North Central	161,056	147,330	158,172	857,424	885,209	926,449	1,018,480	1,032,539	1,084,621
West North Central	119,096	116,371	122,460	189,594	204,955	193,783	308,690	321,326	316,243
South Atlantic	180,118	179,138	155,018	254,905	258,732	308,538	435,023	437,870	463,556
East South Central	100,669	93,975	62,983	58,898	66,546	103,682	159,567	160,521	166,665
West South Central	833	842	933	152,562	161,406	166,923	153,395	162,248	167,856
Mountain	221,074	222,973	222,433	28,836	33,294	36,472	249,910	256,267	258,905
Pacific	417,503	371,234	348,609	253,266	297,937	316,809	670,769	669,171	665,418
New England									
Maine	35,603	32,168	34,514	146	980	2,586	35,749	33,148	37,100
New Hampshire	12,483	10,645	10,288	2,969	4,066	4,900	15,452	14,711	15,188
Vermont	18,421	22,065	21,693	153	361	518	18,574	22,426	22,211
Massachusetts	32,430	30,226	27,062	111,857	118,093	134,048	144,287	148,319	161,110
Rhode Island	446	241	258	27,993	27,024	27,841	28,439	27,265	28,099
Connecticut	13,499	4,733	4,344	51,666	60,360	65,884	65,165	65,093	70,228
Middle Atlantic									
New York	326,563	307,726	310,217	390,686	420,363	434,955	717,249	728,089	745,172
New Jersey	159	115	83	93,783	98,203	102,811	93,942	98,318	102,894
Pennsylvania	65,880	62,819	40,676	373,324	370,509	388,211	439,204	433,328	428,887
East North Central									
Ohio	4,205	3,311	1,486	265,381	269,753	284,603	269,586	273,064	286,089
Indiana	8,048	6,833	5,113	87,889	94,184	96,920	95,937	101,017	102,033
Illinois	16,696	17,949	16,877	326,895	332,138	348,249	343,591	350,087	365,126
Michigan	64,530	63,367	62,276	132,696	139,107	144,887	197,226	202,474	207,163
Wisconsin	67,577	55,870	72,420	44,563	50,027	51,790	112,140	105,897	124,210

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	June	July	August	June	July	August	June	July	August
West North Central									
Minnesota	41,808	42,381	45,273	25,979	36,086	17,425	67,787	78,467	62,698
Iowa	63,561	61,669	64,675	35,681	36,553	38,298	99,242	98,222	102,973
Missouri	7,140	5,688	6,129	60,249	59,411	60,268	67,389	65,099	66,397
North Dakota	0	0	0	2,938	3,175	3,230	2,938	3,175	3,230
South Dakota	1,391	1,583	936	3,465	3,634	4,396	4,856	5,217	5,332
Nebraska	2,171	2,455	2,742	23,611	25,487	26,426	25,782	27,942	29,168
Kansas	3,025	2,595	2,705	37,671	40,609	43,740	40,696	43,204	46,445
South Atlantic									
Delaware	0	0	0	6,747	6,837	6,630	6,747	6,837	6,630
Maryland	337	301	238	24,425	28,725	47,696	24,762	29,026	47,934
District of Columbia	0	0	0	25,504	23,675	26,240	25,504	23,675	26,240
Virginia	20,832	20,929	16,507	37,252	38,183	43,401	58,084	59,112	59,908
West Virginia	2,341	2,259	1,811	131,207	130,995	134,424	133,548	133,254	136,235
North Carolina	33,688	33,943	35,144	4,405	4,327	19,824	38,093	38,270	54,968
South Carolina	72,877	71,596	51,404	3,075	2,962	4,696	75,952	74,558	56,100
Georgia	49,348	49,066	48,847	6,257	7,610	10,231	55,605	56,676	59,078
Florida	695	1,044	1,067	16,033	15,418	15,396	16,728	16,462	16,463
East South Central									
Kentucky	18	14	15	29,848	31,579	33,150	29,866	31,593	33,165
Tennessee	39,888	41,481	32,620	15,305	14,658	22,399	55,193	56,139	55,019
Alabama	60,763	52,480	30,348	7,974	14,301	41,617	68,737	66,781	71,965
Mississippi	0	0	0	5,771	6,008	6,516	5,771	6,008	6,516
West South Central									
Arkansas	259	178	200	12,468	14,228	15,067	12,727	14,406	15,267
Louisiana	0	0	0	23,648	24,737	25,499	23,648	24,737	25,499
Oklahoma	39	48	44	26,094	27,073	28,371	26,133	27,121	28,415
Texas	535	616	689	90,352	95,368	97,986	90,887	95,984	98,675

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Concluded)
THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924		
	June	July	August	June	July	August	June	July	August
Mountain									
Montana	90,654	93,277	94,415	607	678	659	91,261	93,955	95,074
Idaho	70,654	75,232	79,987	136	158	166	70,790	75,390	80,153
Wyoming	528	556	636	3,632	3,727	3,821	4,160	4,283	4,457
Colorado	19,494	20,411	18,676	19,049	19,724	22,495	38,543	40,135	41,171
New Mexico	65	70	72	1,624	1,580	1,631	1,689	1,650	1,703
Arizona	13,056	12,991	12,542	3,751	3,513	3,517	16,807	16,504	16,059
Utah	21,914	16,966	13,333	0	3,832	4,109	21,914	20,798	17,442
Nevada	4,709	3,470	2,772	37	82	74	4,746	3,552	2,846
Pacific									
Washington	115,675	111,239	103,197	3,764	7,525	13,344	119,439	118,764	116,541
Oregon	34,587	27,542	34,666	16,578	24,474	21,553	51,165	52,016	56,219
California	267,241	232,453	210,746	232,924	265,938	281,912	500,165	498,391	492,658

Kilowatt- hours of electricity produced by plants utilizing wood for fuel during August are as follows: Alabama, 69,000; California, 1,143,000; Florida, 381,000; Georgia, 404,000; Louisana, 91000; Minnesota,515,000; Mississippi, 629,000; Oregon, 21,211,000; South Carolina, 38,000; Washington, 1,470,000; Wisconsin, 368,000; and all other States (Arizona, Arkansas, Idaho, Maine, Michigan, Montana, New Mexico, and Virginia), 1,082,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS--thousands of cubic feet 1924		
	June	July	August	June	July	August	June	July	August
United States	2,679,859	2,787,724	2,948,998	1,344,632	1,431,310	1,498,730	4,284,312	5,071,749	5,398,677
New England	171,662	185,296	204,607	99,215	96,242	109,476	0	0	0
Middle Atlantic	850,625	885,282	905,407	20,892	23,672	24,687	36,025	28,968	28,754
East North Central	991,301	1,022,430	1,057,044	2,388	2,695	2,516	178,211	134,949	170,018
West North Central	261,342	267,558	260,198	97,292	103,617	105,171	308,423	356,319	378,365
South Atlantic	231,559	240,737	283,826	99,345	99,385	100,592	85,647	91,109	62,855
East South Central	82,954	88,811	128,983	20,221	20,301	20,828	13,548	6,263	8,612
West South Central	44,115	45,537	49,310	337,638	359,216	362,202	1,495,649	1,602,835	1,671,769
Mountain	44,970	50,293	52,688	19,513	20,392	21,244	17,213	16,404	17,167
Pacific	1,331	1,780	6,935	648,028	705,790	752,014	2,149,596	2,834,902	3,061,137
New England									
Maine	217	174	192	442	4,472	9,794	0	0	0
New Hampshire	3,601	4,450	4,793	0	0	0	0	0	0
Vermont	167	121	278	1,433	2,525	3,023	0	0	0
Massachusetts	101,456	108,199	124,797	23,660	25,347	29,328	0	0	0
Rhode Island	9,570	11,263	10,837	73,497	63,710	66,616	0	0	0
Connecticut	56,651	61,089	63,710	183	188	715	0	0	0
Middle Atlantic									
New York	363,724	395,251	408,170	19,827	22,574	23,934	7,797	3,785	4,783
New Jersey	95,166	100,277	103,928	637	690	689	0	0	0
Pennsylvania	391,735	389,754	393,309	428	408	64	28,228	25,183	23,971
East North Central									
Ohio	281,851	294,165	307,556	775	767	835	176,875	133,349	168,227
Indiana	151,825	151,750	155,106	566	610	615	1,336	1,600	1,791
Illinois	385,956	396,128	410,386	318	347	176	0	0	0
Michigan	124,358	129,951	132,264	414	707	633	0	0	0
Wisconsin	47,311	50,436	51,732	315	264	257	0	0	0
West North Central									
Minnesota	36,764	44,056	31,136	607	653	641	0	0	0
Iowa	69,831	70,250	70,564	2,162	2,330	2,466	0	0	0
Missouri	86,957	82,477	83,278	11,102	12,343	12,186	0	0	0
North Dakota	10,383	11,527	12,574	270	256	270	0	0	0
South Dakota	6,338	6,040	6,924	3,000	3,182	3,443	0	0	0
Nebraska	31,138	34,478	34,644	11,870	10,045	8,988	0	0	0
Kansas	19,931	18,730	21,078	68,281	74,808	77,177	308,423	356,319	378,365

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluded)

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	June	July	August	June	July	August	June	July	August
South Atlantic									
Delaware	7,329	7,449	7,191	0	0	0	0	0	0
Maryland	23,801	27,013	39,738	81	79	79	0	0	0
District of Columbia	22,532	23,357	23,156	0	0	0	0	0	0
Viriginia	37,925	38,346	42,575	243	464	485	0	0	0
West Virginia	120,556	123,967	125,117	0	0	0	85,647	91,109	62,855
North Carolina	7,306	7,277	25,377	150	150	150	0	0	0
South Carolina	5,673	5,667	8,270	243	224	234	0	0	0
Georgia	5,040	6,146	10,978	18,948	19,488	19,760	0	0	0
Florida	1,397	1,515	1,424	79,680	78,980	79,884	0	0	0
East South Central									
Kentucky	41,514	42,239	43,862	479	389	442	13,548	6,263	8,612
Tennessee	23,855	22,268	33,033	401	419	487	0	0	0
Alabama	11,105	17,202	44,708	2,782	2,800	2,957	0	0	0
Mississippi	6,480	7,102	7,380	16,559	16,693	16,942	0	0	0
West South Central									
Arkansas	8,663	8,735	10,130	24,594	29,196	30,883	164,240	188,521	190,763
Louisiana	5,829	7,494	6,800	54,805	52,489	57,582	139,465	148,960	149,979
Oklahoma	10,218	9,329	12,748	41,219	43,869	41,028	399,790	411,936	404,718
Texas	19,405	19,979	19,632	217,020	233,662	232,709	792,154	853,418	926,309
Mountain									
Montana	3,622	3,817	3,541	66	69	69	2,505	2,165	2,590
Idaho	0	0	0	0	0	0	0	0	0
Wyoming	8,714	8,804	7,336	3,620	4,066	3,956	14,708	14,239	14,577
Colorado	30,280	31,211	34,965	0	0	0	0	0	0
New Mexico	2,354	2,323	2,454	667	697	690	0	0	0
Arizona	0	0	0	15,080	15,212	16,213	0	0	0
Utah	0	4,138	4,392	0	0	0	0	0	0
Nevada	0	0	0	180	348	316	0	0	0
Pacific									
Washington	1,226	1,660	6,820	16,332	29,964	40,094	0	0	0
Oregon	105	120	115	393	16,093	4,472	0	0	0
California	0	0	0	631,303	659,733	707,448	2,149,596	2,834,902	3,061,137

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1924

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,600	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	104,400
April	88,100	97,200	80,600	81,900	96,900	96,400
May	85,300	91,100	77,900	79,700	95,100	91,000
June	88,300	95,000	81,360	82,900	98,400	89,300
July	85,700	94,800	79,400	82,700	98,000	89,900
August	86,700	97,100	83,200	90,900	103,500	95,100
September	92,200	100,100	86,300	96,600	105,600	
October	98,400	101,800	89,000	105,700	115,400	
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	41,100
May	23,300	29,800	27,500	27,600	32,600	39,000
June	29,000	35,900	30,500	30,700	34,500	44,800
July	32,100	38,400	33,200	32,600	37,900	46,200
August	34,600	38,700	37,600	42,300	43,600	48,300
September	37,100	40,700	39,700	45,400	44,200	
October	39,000	37,700	38,100	42,200	44,500	
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,800
March	57,000	50,600	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,000
May	62,100	68,400	64,300	71,400	88,400	97,300
June	66,200	75,200	69,000	78,200	94,400	142,800
July	66,400	83,700	62,400	84,100	102,300	163,600
August	64,500	87,400	74,700	98,600	109,000	174,100
September	63,400	90,500	78,900	104,200	106,600	
October	64,400	77,600	73,600	91,400	93,400	
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in August was 152,700,000 kilowatt-hours, 2 2/3 per cent greater than the revised figures for the daily output for the month of July. The curve of total output for 1924, shown on page 8, indicates that the seasonal decrease in the demand for electricity was over in July. The total production of electricity from January 1 to July 31 of this year was 33,706,000,000 kilowatt-hours, about 5½ per cent greater than the output for the similar period of 1923. The production of electricity by the use of water power continues to decrease, indicating that the end of the low-water period has not yet been reached.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January, 167,400,000 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March, 160,800,000 kilowatt-hours - 34.4 per cent; April, 158,000,000 kilowatt-hours - 39.2 per cent; May, 154,600,000 kilowatt-hours - 40.7 per cent; June, 151,800,000 kilowatt-hours - 37.5 per cent; July, 148,700,000 kilowatt-hours - 34.8 per cent; August, 152,700,000 kilowatt-hours - 32.1 per cent.

The curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

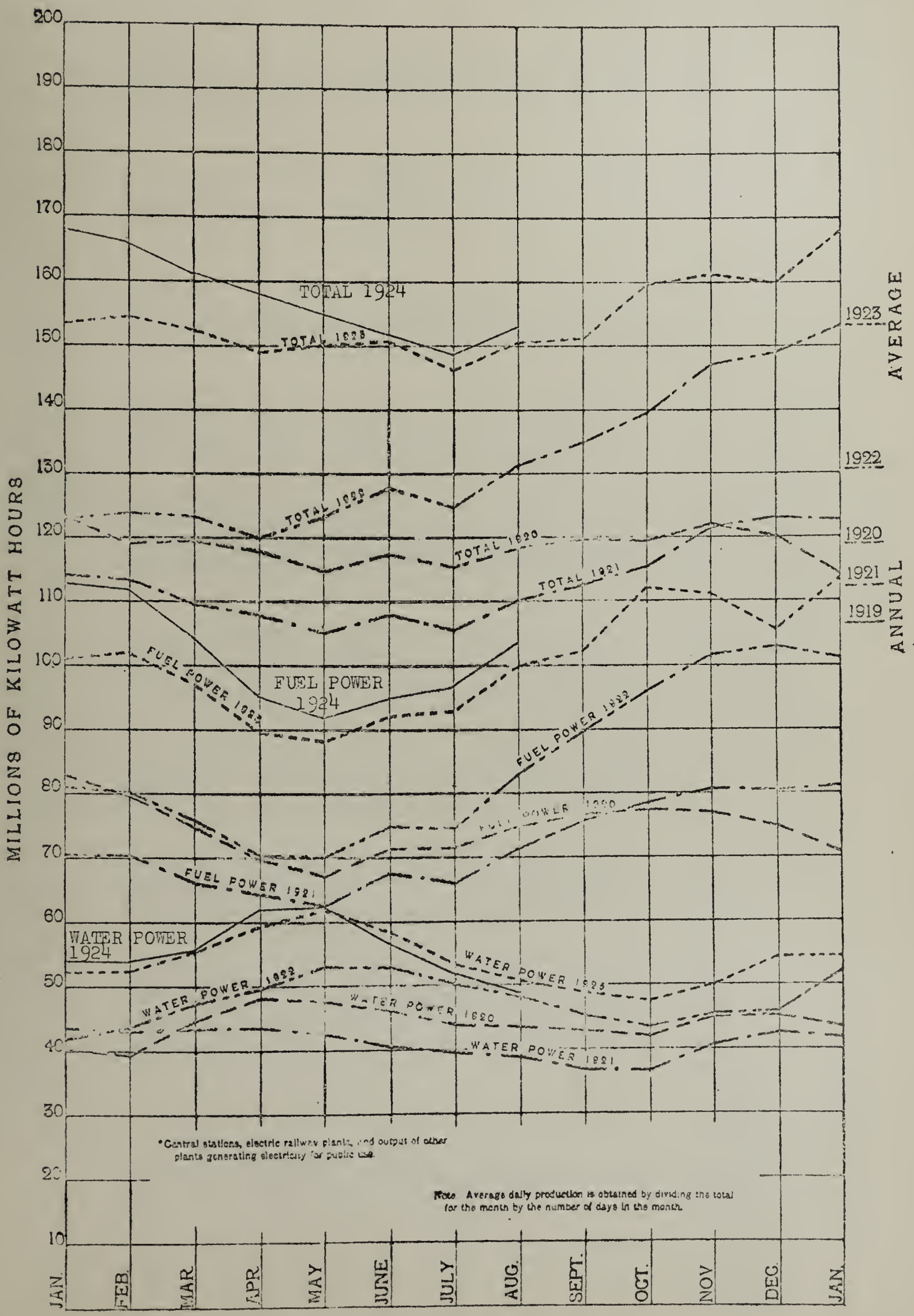
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924



*Central stations, electric railway plants, and output of other plants generating electricity for public use.

Note Average daily production is obtained by dividing the total for the month by the number of days in the month.

705

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

2 Office of the Director

November 3, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
FOR JULY, AUGUST, AND SEPTEMBER, 1924
Compiled by Division of Power Resources, Geological Survey
THOUSANDS OF KILOWATT- HOURS

Division and State	BY WATER POWER			BY FUELS			TOTAL			Percentage gain or loss
	July	August	September	July	August	September	July	August	September	Sept.1924 over Sept.1923
United States	1,602,888	1,517,621	1,496,127	3,009,645	3,217,650	3,309,732	4,612,533	4,735,271	4,805,859	+ 6
New England	100,119	98,609	116,905	210,884	235,359	235,777	311,003	333,968	352,682	+ 8
Middle Atlantic	370,660	350,927	357,494	889,071	926,232	933,518	1,259,731	1,277,159	1,291,012	+ 8
East North Central	147,328	157,752	145,965	886,604	929,412	971,945	1,033,932	1,087,164	1,117,910	+ 8
West North Central	116,371	122,408	114,541	204,970	194,184	202,081	321,341	316,592	316,622	- 4
South Atlantic	179,379	154,315	161,827	258,689	309,476	339,209	438,068	463,791	501,036	+ 7
East South Central	93,975	62,983	54,745	66,593	103,745	113,200	160,568	166,728	167,945	+ 5
West South Central	842	903	832	161,416	165,202	165,798	162,258	166,105	166,630	+14
Mountain	222,987	222,414	209,167	33,294	36,581	38,887	256,281	258,995	248,054	+ 5
Pacific	371,227	347,310	334,651	298,124	317,459	309,317	669,351	664,769	643,968	+ 7
New England										
Maine	32,168	34,580	39,059	980	2,586	404	33,148	37,166	39,463	+17
New Hampshire	10,645	10,484	14,275	4,066	4,895	4,235	14,711	15,379	18,510	+66
Vermont	22,106	21,880	19,976	361	518	482	22,467	22,398	20,458	+102
Massachusetts	30,226	27,062	35,660	118,093	133,635	134,305	148,319	160,697	169,965	+ 8
Rhode Island	241	258	269	27,024	27,841	30,283	27,265	28,099	30,552	-36
Connecticut	4,733	4,345	7,666	60,360	65,884	66,068	65,093	70,229	73,734	+ 8
Middle Atlantic										
New York	307,726	310,172	326,468	420,363	434,967	433,922	728,089	745,139	760,390	+10
New Jersey	115	83	115	98,203	102,920	106,806	98,318	103,003	106,921	+20
Pennsylvania	62,819	40,672	30,911	370,505	388,345	392,790	433,324	429,017	423,701	+ 1
East North Central										
Ohio	3,311	1,486	2,230	270,988	285,825	300,646	274,299	287,311	302,876	+ 5
Indiana	6,833	5,113	4,401	94,295	96,934	100,620	101,128	102,047	105,021	+ 2
Illinois	17,949	16,877	16,471	332,127	349,938	356,837	350,076	366,815	373,308	+13
Michigan	63,354	62,268	58,080	139,167	144,915	157,350	202,521	207,183	215,430	+ 3
Wisconsin	55,881	72,008	64,783	50,027	51,800	56,492	105,908	123,808	121,275	+18

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)
THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924			Percentage gain or loss Sept. 1924 over Sept. 1923
	July	August	September	July	August	September	July	August	September	
West North Central										
Minnesota	42,381	45,218	43,661	36,086	17,501	25,207	78,467	62,719	68,868	- 4
Iowa	61,669	64,675	62,580	36,554	38,313	40,196	98,223	102,998	102,776	+14
Missouri	5,688	6,129	3,177	59,398	60,510	61,374	65,086	66,639	64,551	-25
North Dakota	0	0	0	3,175	3,230	3,317	3,175	3,230	3,317	+ 5
South Dakota	1,583	936	807	3,634	4,395	4,674	5,217	5,331	5,481	+ 6
Nebraska	2,455	2,745	2,028	25,487	26,429	26,777	27,942	29,174	28,805	+ 4
Kansas	2,595	2,705	2,288	40,636	40,806	40,536	43,231	46,511	42,824	- 8
South Atlantic										
Delaware	0	0	0	6,837	6,630	7,196	6,837	6,630	7,196	- 6
Maryland	301	238	164	28,725	47,696	55,891	29,026	47,934	56,055	+ 2
District of Columbia	0	0	0	23,675	26,240	25,535	23,675	26,240	25,535	+ 3
Virginia	20,929	16,440	12,548	38,183	43,426	46,857	59,112	59,866	59,405	- 3
West Virginia	2,259	1,811	675	130,995	134,424	141,985	133,254	136,235	142,660	+ 5
North Carolina	34,184	34,702	35,670	4,277	20,700	29,085	38,461	55,402	64,755	+ 8
South Carolina	71,596	51,404	56,220	2,962	4,696	6,457	74,558	56,100	62,677	+ 4
Georgia	49,066	48,653	55,557	7,617	10,231	10,035	56,683	58,884	65,592	+30
Florida	1,044	1,067	993	15,418	15,433	16,168	16,462	16,500	17,161	+26
East South Central										
Kentucky	14	15	15	31,579	33,150	33,524	31,593	33,165	33,539	+15
Tennessee	41,481	32,620	26,492	14,672	22,409	27,391	56,153	55,029	53,883	+ 5
Alabama	52,480	30,348	28,238	14,301	41,617	45,409	66,781	71,965	73,647	0
Mississippi	0	0	0	6,041	6,569	6,876	6,041	6,569	6,876	+24
West South Central										
Arkansas	178	170	135	14,228	13,391	13,310	14,406	13,561	13,445	+10
Louisiana	0	0	0	24,737	25,517	25,312	24,737	25,517	25,312	+11
Oklahoma	48	44	44	27,073	28,338	27,620	27,121	28,382	27,664	+18
Texas	616	689	653	95,378	97,956	99,556	95,994	98,645	100,209	+15

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)
THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924			Percentage gain or loss
	July	August	September	July	August	September	July	August	September	Sept.1924 over Sept.1923
Mountain										
Montana	93,277	94,415	93,288	678	668	695	93,955	95,083	93,983	+ 9
Idaho	75,232	79,987	71,301	158	166	170	75,390	80,153	71,471	+ 6
Wyoming	556	636	636	3,727	3,857	3,879	4,283	4,493	4,515	+ 6
Colorado	20,411	18,676	16,648	19,724	22,536	24,664	40,135	41,212	41,312	+ 5
New Mexico	70	72	25	1,580	1,635	1,644	1,650	1,707	1,669	+12
Arizona	12,991	12,542	11,161	3,513	3,536	3,792	16,504	16,078	14,953	+12
Utah	16,980	13,314	13,028	3,832	4,109	3,895	20,812	17,423	16,923	-19
Nevada	3,470	2,772	3,080	82	74	148	3,552	2,846	3,228	-18
Pacific										
Washington	111,254	102,334	94,551	7,525	13,321	17,067	118,779	115,655	111,618	- 4
Oregon	27,542	34,323	37,483	24,474	21,634	21,540	52,016	55,957	59,023	+13
California	232,431	210,653	202,617	266,125	282,504	270,710	498,556	493,157	473,327	+ 9

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during September are as follows: Alabama, 53,000; Arkansas, 329,000; Florida, 244,000; Georgia, 407,000; Louisiana, 102,000; Mississippi, 718,000; Minnesota, 663,000; Oregon, 21,489,000; South Carolina, 179,000; Washington, 1,442,000; Wisconsin, 323,000; and all other States (Arizona, California, Idaho, Maine, Michigan, Missouri, Montana, New Hampshire, New Mexico, and Virginia), 1,486,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	July	August	September	July	August	September	July	August	September
United States	2,788,832	3,015,797	3,010,901	1,411,487	1,498,769	1,389,780	5,071,749	5,391,216	5,883,901
New England	185,296	199,013	197,547	96,242	109,493	110,825	0	0	0
Middle Atlantic	885,252	978,048	903,791	23,672	24,699	24,399	28,968	29,238	34,320
East North Central	1,024,080	1,060,317	1,073,725	2,750	2,516	3,851	134,949	150,018	528,451
West North Central	267,543	259,012	266,489	103,678	106,744	110,747	356,319	377,682	422,976
South Atlantic	240,725	284,799	310,339	98,025	99,512	105,170	91,109	76,095	78,006
East South Central	88,871	126,647	135,973	20,320	20,843	19,029	6,263	8,612	6,991
West South Central	44,992	48,465	48,514	359,117	358,645	318,190	1,602,835	1,671,281	1,678,243
Mountain	50,293	52,561	58,337	20,392	21,761	21,872	16,404	17,167	18,272
Pacific	1,780	6,935	16,186	707,611	754,556	675,697	2,834,902	3,061,137	3,116,642
New England									
Maine	174	192	207	4,472	9,794	1,848	0	0	0
New Hampshire	4,450	4,728	4,494	0	0	0	0	0	0
Vermont	121	278	387	2,525	3,023	3,617	0	0	0
Massachusetts	108,199	119,268	118,935	25,347	29,345	30,773	0	0	0
Rhode Island	11,263	10,837	9,760	63,710	66,616	73,407	0	0	0
Connecticut	61,089	63,710	63,764	188	715	1,180	0	0	0
Middle Atlantic									
New York	395,251	408,211	395,128	22,574	23,934	23,196	3,785	4,783	5,904
New Jersey	100,277	104,088	106,091	690	701	698	0	0	0
Pennsylvania	389,724	393,749	402,572	408	64	505	25,183	24,455	28,416
East North Central									
Ohio	295,554	308,993	303,814	767	835	899	133,349	148,227	526,650
Indiana	151,905	155,134	155,707	610	615	662	1,600	1,791	1,801
Illinois	396,128	412,244	416,852	256	176	210	0	0	0
Michigan	130,057	132,354	143,777	843	633	1,732	0	0	0
Wisconsin	50,436	51,592	53,575	264	257	348	0	0	0
West North Central									
Minnesota	44,056	31,218	35,380	653	782	863	0	0	0
Iowa	70,250	70,597	73,251	2,326	2,473	2,332	0	0	0
Missouri	82,462	83,723	84,863	12,343	12,181	13,888	0	0	0
North Dakota	11,527	12,574	12,352	256	270	388	0	0	0
South Dakota	6,040	6,909	7,190	3,182	3,443	3,621	0	0	0
Nebraska	34,478	34,634	34,370	10,045	8,990	7,987	0	0	0
Kansas	18,730	19,357	19,083	74,873	78,605	81,668	356,319	377,682	422,976

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluded)

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS -thousands of cubic feet 1924		
	July	August	September	July	August	September	July	August	September
South Atlantic									
Delaware	7,449	7,191	7,811	0	0	0	0	0	0
Maryland	27,013	39,738	44,182	79	79	81	0	0	0
District of Columbia	23,357	23,156	22,859	0	0	0	0	0	0
Virginia	38,346	42,595	46,123	464	497	574	0	0	0
West Virginia	123,967	125,117	128,647	0	0	0	91,109	76,095	78,006
North Carolina	7,235	26,330	35,968	150	150	150	0	0	0
South Carolina	5,667	8,270	12,432	224	234	254	0	0	0
Georgia	6,176	10,978	10,782	19,488	19,760	20,843	0	0	0
Florida	1,515	1,424	1,535	77,620	78,792	83,268	0	0	0
East South Central									
Kentucky	42,239	43,862	46,080	389	442	430	6,263	8,612	6,991
Tennessee	22,268	33,033	36,719	407	502	492	0	0	0
Alabama	17,202	42,558	44,989	2,800	2,957	2,688	0	0	0
Mississippi	7,162	7,194	8,185	16,724	16,942	15,419	0	0	0
West South Central									
Arkansas	8,735	9,250	8,973	29,196	28,394	25,988	188,521	190,310	183,935
Louisiana	7,494	6,800	7,097	52,489	57,291	54,704	148,960	149,979	145,768
Oklahoma	9,329	12,676	13,795	43,869	40,352	36,536	411,936	404,683	369,828
Texas	19,434	19,739	18,649	233,563	232,608	200,962	853,418	926,309	978,712
Mountain									
Montana	3,817	3,318	3,396	69	254	257	2,165	2,590	2,599
Idaho	0	0	0	0	0	0	0	0	0
Wyoming	8,804	7,335	8,232	4,066	4,124	4,231	14,239	14,563	15,673
Colorado	31,211	35,085	40,104	3	0	0	0	0	0
New Mexico	2,323	2,431	2,336	697	690	756	0	0	0
Arizona	0	0	0	15,212	16,377	16,155	0	0	0
Utah	4,138	4,392	4,269	0	0	3	0	0	0
Nevada	0	0	0	348	316	473	0	0	0
Pacific									
Washington	1,660	6,820	16,066	29,964	40,095	31,637	0	0	0
Oregon	120	115	120	16,093	4,522	2,128	0	0	0
California	0	0	0	661,554	709,939	641,932	2,834,902	3,061,137	3,116,642

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1924.

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,600	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	104,400
April	88,100	97,200	80,600	81,900	96,900	96,400
May	85,300	91,100	77,900	79,700	95,100	91,000
June	88,300	95,000	81,360	82,900	98,400	89,300
July	85,700	94,800	79,400	82,700	98,000	90,000
August	86,700	97,100	83,200	90,900	103,500	97,300
September	92,200	100,100	86,300	96,600	105,600	100,400
October	98,400	101,800	89,000	105,700	115,400	
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	41,100
May	23,300	29,800	27,500	27,600	32,600	39,000
June	29,000	35,900	30,500	30,700	34,500	44,800
July	32,100	38,400	33,200	32,600	37,900	45,500
August	34,600	38,700	37,600	42,300	43,600	48,300
September	37,100	40,700	39,700	45,400	44,200	46,300
October	39,000	37,700	38,100	42,200	44,500	
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,300
March	57,000	50,600	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,000
May	62,100	68,400	64,300	71,400	88,400	97,300
June	66,200	75,200	69,000	78,200	94,400	142,800
July	66,400	83,700	62,400	84,100	102,300	163,600
August	64,500	87,400	74,700	98,600	109,000	173,900
September	63,400	90,500	78,900	104,200	106,600	196,100
October	64,400	77,600	73,600	91,400	93,400	
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in September was 160,200,000 kilowatt-hours, almost 5 per cent greater than the daily output for the month of August. Starting with June the curve of average daily total output for 1924 shown on page 8 is nearly parallel with the similar curve for 1922. The increase in the demand for electricity in the latter part of 1922 was pronounced. The recovery of the demand apparently lost the first part of this year, combined with the seasonal increase that usually occurs the latter part of each year, may produce such a demand for electricity for the remaining months of 1924 that the curve of total daily output may continue parallel with the 1922 curve for the rest of the year.

A column has been added to the table on pages 1 to 3 which shows the gain or loss in per cent of the output for September, 1924, as compared with the output for September, 1923. These percentages show that the output for the entire United States for September of the present year was 6 per cent greater than for September, 1923. The West South Central States (Arkansas, Louisiana, Oklahoma, and Texas) show the largest percentage increase (+14 per cent). The West North Central States (Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas) show a decrease of 4 per cent. Among those States which have a large monthly output (over 100,000,000 kilowatt-hours) New Jersey made the largest percentage gain, with a 20 per cent increase. Wisconsin was a close second, with 18 per cent increase. Pennsylvania showed the smallest gain, with a little over 1 per cent increase. Probably some of the larger percentage changes indicated for some of the States are due to changes in sources of power. The figures of output, as published in these reports, are for power generated in each State, and do not necessarily indicate the power utilized in each State.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January, 167,400,000 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March, 160,800,000 kilowatt-hours - 34.4 per cent; April, 158,000,000 kilowatt-hours - 39.2 per cent; May, 154,600,000 kilowatt-hours - 40.7 per cent; June, 151,800,000 kilowatt-hours - 37.5 per cent; July, 148,800,000 kilowatt-hours - 34.8 per cent; August, 152,700,000 kilowatt-hours - 32.0 per cent; September 160,200,000 kilowatt-hours - 31.1 per cent.

The curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

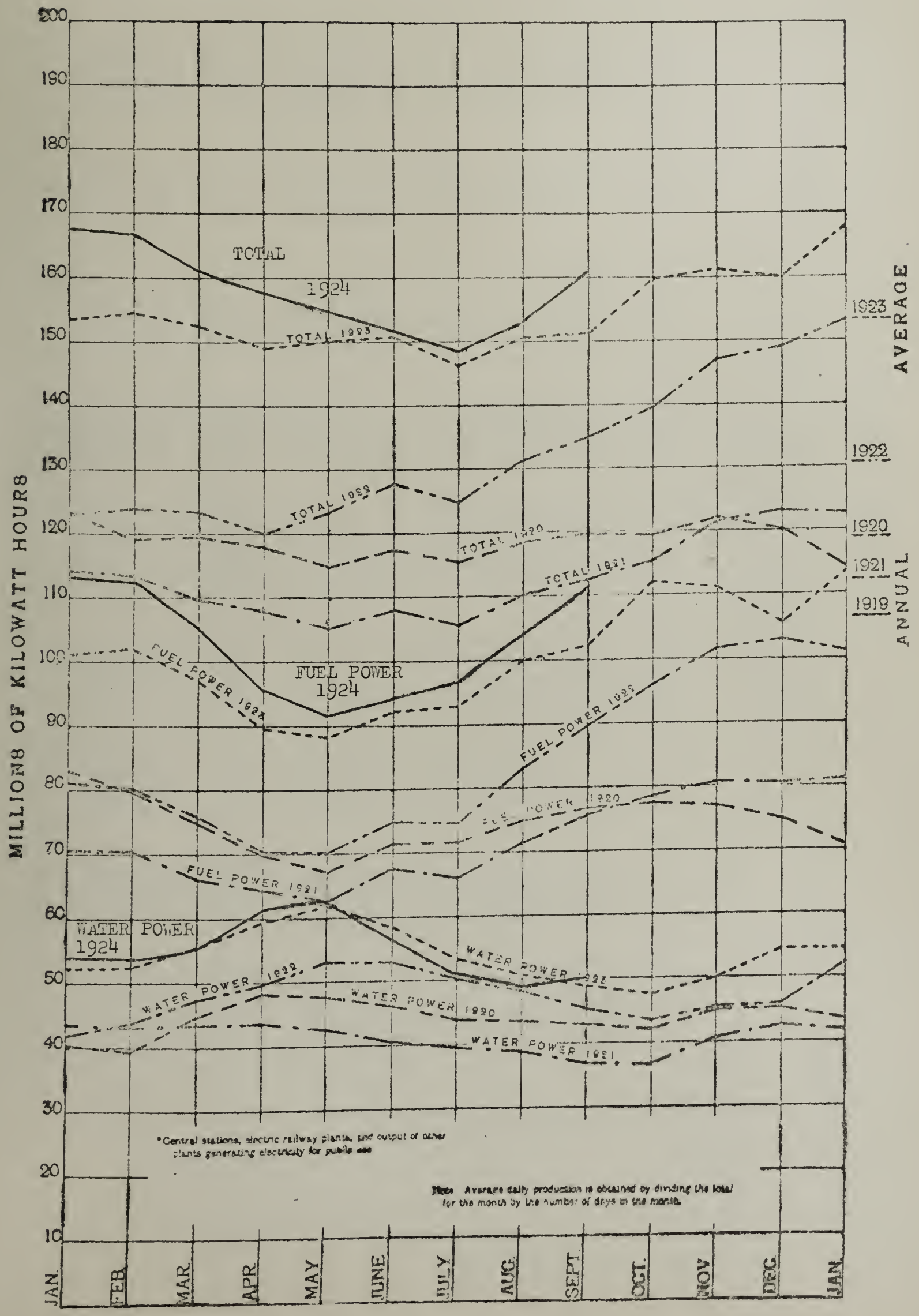
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC-UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924



*Central stations, electric railway plants, and output of other plants generating electricity for public use

Note: Average daily production is obtained by dividing the total for the month by the number of days in the month.

08

A. E. PATTON

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Office of the Director

December 5, 1924.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES FOR AUGUST, SEPTEMBER, AND OCTOBER, 1924

Compiled by Division of Power Resources, Geological Survey

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER			BY FUELS			TOTAL			Percentage change in output-1923 to 1924	
	August	September	October	August	September	October	August	September	October	September	October
United States	1,516,442	1,492,070	1,628,040	3,218,984	3,311,027	3,559,084	4,735,426	4,803,097	5,187,124	+ 6.6	+ 3.5
New England	98,203	116,895	123,840	236,307	235,671	266,307	334,510	352,566	390,147	+ 7.5	+ 4.7
Middle Atlantic	350,927	357,529	418,268	926,232	932,423	1,019,371	1,277,159	1,289,952	1,437,639	+ 7.5	+ 6.7
East North Central	157,752	145,451	140,239	929,442	972,741	1,066,062	1,087,194	1,118,192	1,206,301	+ 8.4	+ 6.2
West North Central	122,412	113,966	123,274	194,136	202,329	228,950	316,548	316,295	352,224	- 4.2	- 2.8
South Atlantic	154,262	161,048	214,529	310,069	340,848	331,882	464,331	501,896	546,411	+ 7.0	+ 7.1
East South Central	62,659	54,369	47,144	103,745	113,175	137,731	166,404	167,544	184,875	+ 4.7	+ 1.5
West South Central	903	862	878	165,013	165,683	175,474	165,916	166,545	176,352	+14.1	+14.2
Mountain	222,014	208,834	200,280	36,581	38,879	41,110	258,595	247,713	241,390	+ 5.1	+ 4.6
Pacific	347,310	333,116	359,588	317,459	309,278	292,197	664,769	642,394	651,785	+ 6.7	+ 5.6
New England											
Maine	34,580	39,041	43,202	2,586	409	2,288	37,166	39,450	45,490	+17	+19
New Hampshire	10,484	14,283	12,469	4,895	4,227	4,756	15,379	18,510	17,225	+66	+24
Vermont	21,474	19,976	24,150	1,461	482	458	22,935	20,458	24,608	+102	+97
Massachusetts	27,062	35,660	35,199	133,635	134,199	150,379	160,697	169,859	185,578	+ 8	+ 1
Rhode Island	258	269	192	27,841	30,283	37,546	28,099	30,552	37,738	- 36	-27
Connecticut	4,345	7,666	8,628	65,889	66,071	70,880	70,234	73,737	79,508	+ 8	+ 9
Middle Atlantic											
New York	310,172	326,488	364,184	434,967	433,922	462,976	745,139	760,410	827,160	+ 10	+ 7
New Jersey	83	130	120	102,920	106,806	117,335	103,003	106,936	117,455	+ 20	+ 4
Pennsylvania	40,672	30,911	53,964	388,345	391,695	439,060	429,017	422,606	493,024	+ 1	+ 7
East North Central											
Ohio	1,486	2,230	1,757	285,825	301,094	324,346	287,311	303,324	326,103	+ 6	+ 3
Indiana	5,113	4,401	3,837	96,934	100,620	111,672	102,047	105,021	115,509	+ 2	+ 5
Illinois	16,877	16,471	15,606	349,950	357,120	391,662	366,827	373,591	407,268	+ 13	+10
Michigan	62,268	57,466	58,474	144,933	157,415	172,446	207,201	214,881	230,920	+ 2	0
Wisconsin	72,008	64,883	60,565	51,800	56,492	65,936	123,808	121,375	126,501	+ 18	+17

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924			Percentage change in output-1923 to 1924	
	August	September	October	August	September	October	August	September	October	September	October
West North Central	45,218	43,661	52,599	17,501	25,208	26,864	62,719	68,869	79,463	- 4	- 1
Minnesota	64,675	62,565	64,819	38,313	40,258	44,357	102,988	102,823	109,176	+ 14	+ 11
Iowa	6,129	3,177	1,720	60,510	61,386	66,626	66,639	64,563	68,346	- 25	- 28
Missouri	0	0	0	3,230	3,317	3,626	3,230	3,317	3,626	+ 5	+ 7
North Dakota	936	807	649	4,395	4,674	5,141	5,331	5,481	5,790	+ 6	0
South Dakota	2,745	2,043	2,231	26,429	26,788	28,809	29,174	28,831	31,040	+ 4	+ 6
Nebraska	2,709	1,713	1,256	43,758	40,698	53,527	46,467	42,411	54,783	- 9	+ 10
Kansas											
South Atlantic	0	0	0	6,630	7,196	7,244	6,630	7,196	7,244	- 6	- 8
Delaware	238	164	35	47,696	55,891	43,873	47,934	56,055	43,908	+ 2	- 33
Maryland	0	0	0	26,240	25,535	26,564	26,240	25,535	26,564	+ 3	+ 3
District of Columbia	16,387	12,174	18,775	43,421	46,914	45,715	59,808	59,088	64,490	- 4	0
Virginia	1,811	675	1,525	134,952	142,993	157,580	136,763	143,668	159,105	+ 6	+ 2
West Virginia	34,702	35,265	54,165	20,700	29,584	14,240	55,402	64,849	68,405	+ 8	- 13
North Carolina	51,404	56,220	76,692	4,696	6,457	8,365	56,100	62,677	85,057	+ 4	+ 81
South Carolina	48,653	55,557	62,434	10,231	10,036	10,297	58,884	65,593	72,731	+ 30	+ 47
Georgia	1,067	993	903	15,503	16,242	18,004	16,570	17,235	18,907	+ 27	+ 22
Florida											
East South Central	15	15	15	33,150	33,449	38,362	33,165	33,464	38,377	+ 15	+ 20
Kentucky	32,296	26,116	26,598	22,409	27,391	31,125	54,705	53,507	57,723	+ 4	+ 2
Tennessee	30,348	28,238	20,531	41,617	45,409	60,907	71,965	73,647	81,438	0	- 7
Alabama	0	0	0	6,569	6,926	7,337	6,569	6,926	7,337	+ 24	+ 21
Mississippi											
West South Central	170	135	166	13,391	13,311	14,590	13,561	13,446	14,756	+ 10	+ 8
Arkansas	0	0	0	25,517	25,312	27,271	25,517	25,312	27,271	+ 11	+ 10
Louisiana	44	44	54	28,338	27,620	30,898	28,382	27,664	30,952	+ 18	+ 20
Oklahoma	689	683	658	97,767	99,440	102,715	98,456	100,123	103,373	+ 15	+ 15
Texas											

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924			Percentage change in output-1923 to 1924	
	August	September	October	August	September	October	August	September	October	September	October
Mountain											
Montana	94,415	93,347	92,447	668	695	753	95,083	94,042	93,200	+ 9	+ 9
Idaho	79,587	70,901	63,275	166	163	180	79,753	71,064	63,455	+ 5	+ 34
Wyoming	636	644	476	3,857	3,879	4,219	4,493	4,523	4,695	+ 6	+ 2
Colorado	18,676	16,648	17,835	22,536	24,654	26,178	41,212	41,302	44,013	+ 5	+ 5
New Mexico	72	25	25	1,635	1,641	1,678	1,707	1,666	1,703	+ 12	+ 5
Arizona	12,542	11,161	7,336	3,536	3,792	3,569	16,078	14,953	10,905	+ 12	- 17
Utah	13,314	13,028	16,868	4,109	3,895	4,354	17,423	16,923	21,222	- 19	- 38
Nevada	2,772	3,080	2,018	74	160	179	2,846	3,240	2,197	- 18	- 48
Pacific											
Washington	102,334	93,504	116,837	13,321	17,068	11,782	115,655	110,572	128,619	- 5	+ 9
Oregon	34,323	36,995	44,759	21,634	21,500	19,423	55,957	58,495	64,182	+ 12	+ 12
California	210,653	202,617	197,992	282,504	270,710	260,992	493,157	473,327	458,984	+ 9	+ 4

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during October are as follows: Alabama, 56,000; Arkansas, 277,000; California, 1,228,000; Florida, 236,000; Georgia, 407,000; Louisiana, 161,000; Minnesota, 813,000; Mississippi, 693,000; Oregon, 19,030,000; South Carolina, 90,000; Washington, 1,369,000; Wisconsin, 201,000; and all other States (Arizona, Idaho, Maine, Michigan, Missouri, Montana, New Mexico, Virginia), 1,134,000.

PRODUCTION OF ELECTRIC POWER AND CONSUMPTION OF FUEL BY PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES (Continued)

THOUSANDS OF KILOWATT-HOURS

Division and State	BY WATER POWER 1924			BY FUELS 1924			TOTAL 1924			Percentage change in output-1923 to 1924	
	August	September	October	August	September	October	August	September	October	September	October
Mountain											
Montana	94,415	93,347	92,447	668	695	753	95,083	94,042	93,200	+ 9	+ 9
Idaho	79,587	70,991	63,275	166	163	180	79,753	71,064	63,455	+ 5	+ 34
Wyoming	636	644	476	3,857	3,879	4,219	4,493	4,523	4,695	+ 6	+ 2
Colorado	18,676	16,648	17,835	22,536	24,654	26,178	41,212	41,302	44,013	+ 5	+ 5
New Mexico	72	25	25	1,635	1,641	1,678	1,707	1,666	1,703	+ 12	+ 5
Arizona	12,542	11,161	7,336	3,536	3,792	3,569	16,078	14,953	10,905	+ 12	- 17
Utah	13,314	13,028	16,868	4,109	3,895	4,354	17,423	16,923	21,222	- 19	- 38
Nevada	2,772	3,080	2,018	74	160	179	2,846	3,240	2,197	- 18	- 48
Pacific											
Washington	102,334	93,504	116,837	13,321	17,068	11,782	115,655	110,572	128,619	- 5	+ 9
Oregon	34,323	36,995	44,759	21,634	21,500	19,423	55,957	58,495	64,182	+ 12	+ 12
California	210,653	202,617	197,992	282,504	270,710	260,992	493,157	473,327	458,984	+ 9	+ 4

Kilowatt-hours of electricity produced by plants utilizing wood for fuel during October are as follows: Alabama, 56,000; Arkansas, 277,000; California, 1,228,000; Florida, 236,000; Georgia, 407,000; Louisiana, 161,000; Minnesota, 813,000; Mississippi, 693,000; Oregon, 19,030,000; South Carolina, 90,000; Washington, 1,369,000; Wisconsin, 201,000; and all other States (Arizona, Idaho, Maine, Michigan, Missouri, Montana, New Mexico, Virginia), 1,134,000.

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY

Division	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	August	September	October	August	September	October	August	September	October
United States	2,944,531	3,013,184	3,206,083	1,502,477	1,389,264	1,401,624	5,391,216	5,880,655	6,145,979
New England	199,013	197,384	215,014	114,796	110,853	130,168	0	0	0
Middle Atlantic	906,048	902,810	956,144	24,699	23,843	26,791	29,238	33,341	29,028
East North Central	1,060,492	1,076,327	1,159,913	2,516	3,953	3,783	150,018	528,451	602,816
West North Central	259,015	266,277	291,207	104,211	108,483	103,592	377,682	420,909	481,449
South Atlantic	285,743	312,058	300,533	99,962	105,326	111,351	76,095	78,006	75,308
East South Central	126,647	135,848	155,335	20,843	19,029	17,120	8,612	6,991	7,854
West South Central	48,077	47,950	54,530	359,133	320,187	321,176	1,671,281	1,678,043	1,902,823
Mountain	52,561	58,330	62,282	21,761	21,893	23,516	17,153	18,272	16,889
Pacific	6,935	16,200	11,125	754,556	675,697	664,127	3,061,137	3,116,642	3,029,812
New England									
Maine	192	207	183	9,794	1,862	10,241	0	0	0
New Hampshire	4,728	4,470	4,785	0	0	0	0	0	0
Vermont	278	387	172	8,322	3,617	3,120	0	0	0
Massachusetts	119,268	118,796	133,423	29,345	30,782	37,341	0	0	0
Rhode Island	10,837	9,760	9,256	66,616	73,407	78,236	0	0	0
Connecticut	63,710	63,764	67,195	719	1,185	1,230	0	0	0
Middle Atlantic									
New York	408,211	395,128	411,818	23,934	22,640	25,591	4,783	5,904	4,505
New Jersey	104,088	106,091	112,491	701	698	745	0	0	0
Pennsylvania	393,749	401,591	431,835	64	505	455	24,455	27,437	24,523
East North Central									
Ohio	308,993	303,827	324,049	835	899	959	148,227	526,650	601,407
Indiana	155,134	155,707,	165,846	615	662	778	1,791	1,801	909
Illinois	412,284	419,382	454,168	176	210	201	0	0	0
Michigan	132,489	143,836	154,120	633	1,834	1,418	0	0	0
Wisconsin	51,592	53,575	61,730	257	348	427	0	0	500
West North Central									
Minnesota	31,218	35,385	35,567	782	863	919	0	0	0
Iowa	70,597	73,176	79,765	2,473	2,332	2,207	0	0	0
Missouri	83,723	84,714	92,705	12,181	13,888	10,017	0	0	0
North Dakota	12,574	12,352	13,499	270	388	336	0	0	0
South Dakota	6,909	7,190	7,914	3,443	3,621	3,518	0	0	0
Nebraska	34,634	34,319	37,696	8,990	7,990	8,794	0	0	0
Kansas	19,360	19,141	24,061	76,072	79,401	77,801	377,682	420,909	481,449

CONSUMPTION OF FUELS BY ELECTRIC PUBLIC-UTILITY COMPANIES IN PRODUCTION OF ELECTRICITY (Concluded)

Division and State	COAL - short tons 1924			FUEL OIL - barrels 1924			NATURAL GAS-thousands of cubic feet 1924		
	August	September	October	August	September	October	August	September	October
South Atlantic	7,191	7,811	7,901	0	0	0	0	0	0
Delaware	39,738	44,182	36,083	79	81	80	0	0	0
Maryland	23,156	22,859	23,544	0	0	0	0	0	0
District of Columbia	42,505	46,216	44,705	497	574	440	0	0	0
Virginia	126,151	129,850	144,055	0	0	0	76,095	78,006	75,308
West Virginia	26,330	36,266	20,170	150	150	150	0	0	0
North Carolina	8,270	12,452	11,585	234	254	243	0	0	0
South Carolina	10,978	10,907	9,669	19,760	20,843	22,917	0	0	0
Georgia	1,424	1,535	2,821	79,242	83,424	87,521			
Florida									
East South Central	43,862	45,830	49,225	442	430	450	8,612	6,991	7,854
Kentucky	33,033	36,719	36,816	502	492	532	0	0	0
Tennessee	42,558	44,989	60,506	2,957	2,688	45	0	0	0
Alabama	7,194	8,260	8,788	16,942	15,419	16,093			
Mississippi									
West South Central	9,250	8,973	13,374	28,394	25,988	33,117	190,310	183,935	195,206
Arkansas	6,800	7,097	7,624	57,291	54,704	57,398	149,979	145,768	155,468
Louisiana	12,676	13,795	14,989	40,352	36,536	37,270	404,683	369,828	396,930
Oklahoma	19,351	18,085	18,543	233,096	202,959	193,391	926,309	978,512	1,155,219
Texas									
Mountain	3,318	3,396	3,693	254	257	270	2,590	2,599	2,727
Montana	0	0	0	0	0.	0	0	0	0
Idaho	7,335	8,232	9,526	4,124	4,231	5,641	14,563	15,673	14,162
Wyoming	35,085	40,074	42,006	0	0	0	0	0	0
Colorado	2,431	2,359	2,317	690	756	880	0	0	0
New Mexico	0	0	0	16,377	16,155	16,098	0	0	0
Arizona	4,392	4,269	4,740	0	0	0	0	0	0
Utah	0	0	0	316	494	627	0	0	0
Nevada									
Pacific	6,820	16,080	10,810	40,095	31,637	25,232	0	0	0
Washington	115	120	315	4,522	2,128	1,539	0	0	0
Oregon	0	0	0	709,939	641,932	637,356	3,061,137	3,116,642	3,029,812
California									

AVERAGE DAILY CONSUMPTION OF FUELS
BY ELECTRIC PUBLIC-UTILITY POWER PLANTS IN THE UNITED STATES
1919 - 1924.

Coal
(Net tons)

Month	1919	1920	1921	1922	1923	1924
January	104,000	115,600	95,000	95,300	114,700	118,200
February	102,000	111,500	93,900	92,600	116,000	114,700
March	93,900	105,000	85,200	87,800	108,100	104,400
April	88,100	97,200	80,600	81,900	96,900	96,400
May	85,300	91,100	77,900	79,700	95,100	91,000
June	88,300	95,000	81,360	82,900	98,400	89,300
July	85,700	94,800	79,400	82,700	98,000	90,000
August	86,700	97,100	83,200	90,900	103,500	95,000
September	92,200	100,100	86,300	96,600	105,600	100,400
October	98,400	101,800	89,000	105,700	115,400	103,400
November	112,500	105,200	92,600	111,900	115,800	
December	116,800	103,200	93,700	116,000	109,500	
Year	96,200	101,400	86,500	93,700	106,500	

Oil
(Barrels)

Month	1919	1920	1921	1922	1923	1924
January	21,900	41,600	28,900	35,700	40,500	52,200
February	21,900	40,300	27,900	35,600	41,600	53,200
March	20,400	34,200	27,400	30,600	35,200	49,700
April	19,400	30,400	28,100	27,500	32,700	41,100
May	23,300	29,800	27,500	27,600	32,600	39,000
June	29,000	35,900	30,500	30,700	34,500	44,800
July	32,100	38,400	33,200	32,600	37,900	45,500
August	34,600	38,700	37,600	42,300	43,600	48,500
September	37,100	40,700	39,700	45,400	44,200	46,300
October	39,000	37,700	38,100	42,200	44,500	45,200
November	41,700	32,000	38,200	41,300	46,100	
December	40,800	30,600	38,400	42,200	47,200	
Year	30,300	35,900	33,000	36,200	40,200	

Gas
(M cubic feet)

Month	1919	1920	1921	1922	1923	1924
January	35,500	46,100	55,300	52,700	67,600	79,200
February	47,100	45,300	52,000	57,100	65,100	89,800
March	57,000	50,600	50,100	51,600	73,300	103,000
April	62,000	60,100	62,000	61,700	76,600	94,000
May	62,100	68,400	64,300	71,400	88,400	97,300
June	66,200	75,200	69,000	78,200	94,400	142,800
July	66,400	83,700	62,400	84,100	102,300	163,600
August	64,500	87,400	74,700	98,600	109,000	173,900
September	63,400	90,500	78,900	104,200	106,600	196,000
October	64,400	77,600	73,600	91,400	93,400	198,300
November	60,700	63,600	73,800	79,400	73,500	
December	51,000	60,400	63,300	62,200	81,100	
Year	58,600	67,500	65,000	74,400	86,200	

The average daily production of electricity by public-utility power plants in October was 167,300,000 kilowatt-hours, 4⅕ per cent greater than the daily output for the month of September, and practically equal to the record rate of production established in January. The curve of total daily output for 1924 on page 8 indicates that the increase in the use of electricity since July is continuing at a nearly uniform rate. If this rate of increase is continued to the end of the year, the output of electricity by public-utility power plants will start off in the new year at about normal.

The unusually heavy rainfall in September in the eastern part of the United States is reflected in the unusual increase in the production of electricity by the use of water power in September and October. An examination of the curve of output by water power for 1924 shown on page 8 shows that the curve for this year is abnormal. The dry weather generally prevalent in the east in October and November will probably bring the curve of output by water power to a more nearly normal position in November.

The average daily production of electricity by public-utility power plants and the proportion produced by water power for each month of this year were as follows: January, 167,400,000 kilowatt-hours - 32.3 per cent; February, 166,700,000 kilowatt-hours - 32.3 per cent; March, 160,800,000 kilowatt-hours - 34.4 per cent; April, 158,000,000 kilowatt-hours - 39.2 per cent; May, 154,600,000 kilowatt-hours - 40.7 per cent; June, 151,800,000 kilowatt-hours - 37.5 per cent; July, 148,800,000 kilowatt-hours - 34.8 per cent; August, 152,700,000 kilowatt-hours - 32.0 per cent; September, 160,100,000 kilowatt-hours - 31.1 per cent; October, 167,300,000 kilowatt-hours - 31.4 per cent.

The curves on page 8 show the average daily output of electricity in kilowatt-hours by public-utility power plants for each month for each of the last four years and the tables on page 6 show the average daily consumption of the different fuels for each month from 1919 to date.

The quantities in the tables are based on the operation of about 4,000 power plants, each producing 10,000 kilowatt-hours or more per month, engaged in generating electricity for public use, including CENTRAL STATIONS, ELECTRIC RAILWAY PLANTS, and CERTAIN OTHER PLANTS THAT CONTRIBUTE TO THE PUBLIC SUPPLY. Reports are received from plants representing over 95 per cent of the total capacity. The output of those plants which do not submit reports is estimated; therefore the figures of output and fuel consumption as reported in the accompanying tables are on a 100-per cent basis.

These monthly reports are published about 30 days after the last month included in the report. It should be observed that in each report the figures for the last month, and sometimes for the last two months, given in previous reports are revised, owing to the receipt of data after previous publication. As a rule, however, the revision is small. This report is therefore subject to revision in subsequent statistical reports of the Geological Survey relating to power production.

Prepared under the direction of A. H. Horton.

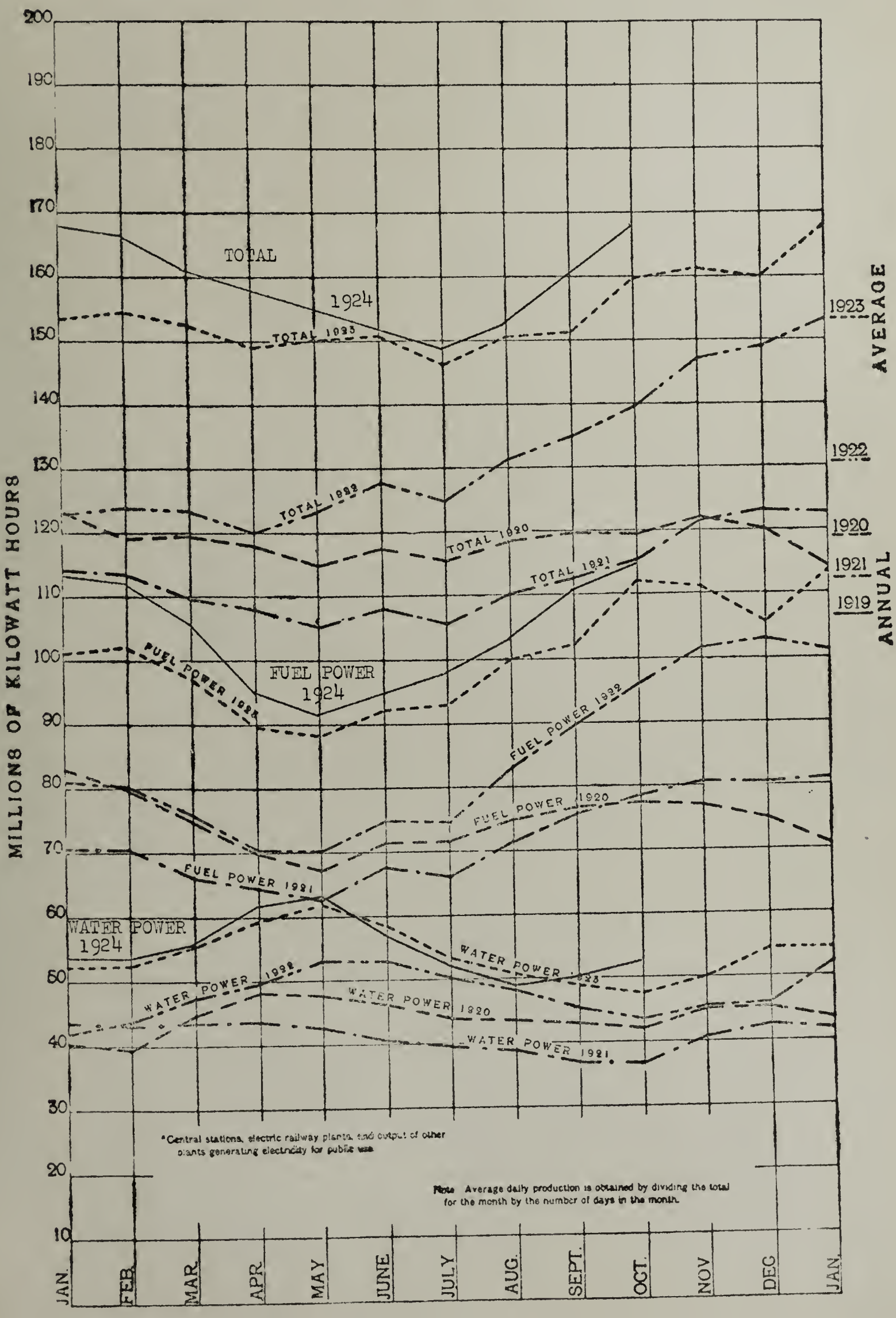
AVERAGE DAILY PRODUCTION OF ELECTRICITY BY PUBLIC UTILITY PLANTS*

IN THE UNITED STATES

BY

WATER POWER, FUEL POWER, AND BOTH WATER POWER AND FUEL POWER

1920 TO 1924



*Central stations, electric railway plants, and output of other plants generating electricity for public use.

Note Average daily production is obtained by dividing the total for the month by the number of days in the month.

UNIVERSITY OF ILLINOIS-URBANA
3 0112 107664705